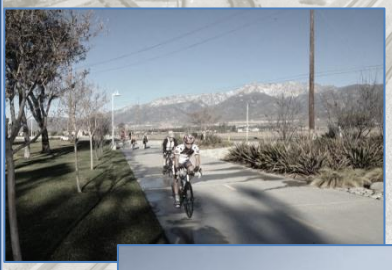
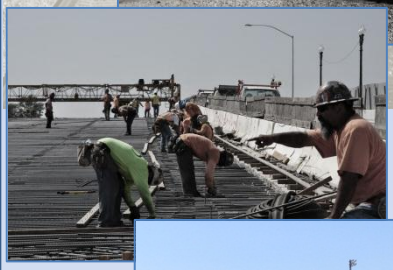
FINAL

SAN BERNARDINO

COUNTYWIDE TRANSPORTATION PLAN





Prepared by:

Governments SANBAG Working Together

San Bernardino Associated Governments

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SANBAG Mission Statement

To enhance the quality of life for all residents, SANBAG will:

- Improve cooperative regional planning
- Develop an accessible, efficient, multi-modal transportation system
- Strengthen development efforts
- Exert leadership in creative problem solving

To successfully accomplish this mission, SANBAG will foster enhanced relationships among all of its stakeholders while adding to the value of local governments.

SANBAG Member Jurisdictions

- City of Adelanto
- Town of Apple Valley
- City of Barstow
- City of Big Bear Lake
- City of Chino
- City of Chino Hills
- City of Colton
- City of Fontana
- City of Grand Terrace
- City of Hesperia
- City of Highland
- City of Loma Linda
- City of Montclair
- City of Needles
- City of Ontario
- City of Rancho Cucamonga
- City of Redlands
- City of Rialto
- City of San Bernardino
- County of San Bernardino
- City of Twentynine Palms
- City of Upland
- City of Victorville
- City of Yucaipa
- Town of Yucca Valley

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ES Executive Summary

The transportation landscape is changing. As we look back over the trends and accomplishments of the last 25 years, we see a gradual shift at the state level from a principal focus on mobility and congestion relief to a principal focus on sustainability. We see this even in the titles of key propositions and legislation. Sustainability has certainly not been ignored in prior decades, and need for congestion relief remains in the decades to come, but clearly the emphasis has shifted. This shift is a significant consideration in how San Bernardino County plans its transportation system going forward.

The purpose of this Countywide Transportation Plan (CTP) is to lay out a strategy for long term investment in and management of San Bernardino County's transportation assets. Before describing the strategy, however, it is important to understand some of the history behind these changes in emphasis to properly set the stage for a number of challenging issues that need to be addressed in the CTP.

Transportation Funding in the Last 30 Years – A Brief History

The emphasis on mobility and congestion relief in California can be seen in legislation dating back to the mid-1980s, when the state legislature began authorizing sales taxes for transportation projects in individual counties. Under this legislation, counties and cities could cooperatively establish new "transportation authorities" to administer the tax proceeds in keeping with voter-approved expenditure programs. In 1984, voters in Santa Clara County approved the first such sales tax in California. The legislature soon gave all counties the power to adopt these taxes, prompting 17 counties, including San Bernardino County, to adopt these voter-approved taxes by 1990.

The voter-approved San Bernardino County half-cent sales tax began generating funds in April, 1990. Some of the cornerstone projects in the first Measure I Expenditure Plan included construction of the SR-71 and SR-210 freeways and initiation of service for the regional Metrolink commuter rail system in 1991. The SR-60 and I-10 freeways underwent major upgrades to 4 mixed flow lanes plus 1 High-Occupancy Vehicle (HOV) lane in the West Valley, and a truck climbing lane was added on eastbound I-10 through Redlands.

At the regional level, the sales tax measures have enabled Southern California to go from virtually no passenger rail service in 1990 to over 500 miles of commuter rail and over 100 miles of heavy rail and light rail today. This has been an important element in transforming downtown Los Angeles into a much more vibrant center of activity than it was 20 years ago, with greatly increased transit connectivity region wide. **Figure ES-1** shows the current extent of the regional rail network. San Bernardino County is a vital part of this growing network.

Mobility needs were further highlighted in Proposition 111, titled The Traffic Congestion Relief and Spending Limitation Act Of 1990, passed by the voters of California in June 1990. The official proposition summary stated, in part:

> *"This measure would enact a statewide traffic congestion relief program and update the spending limit on state and local government to better reflect the needs of a growing California population. It would provide new revenues to be used to reduce traffic congestion by building state highways, local streets and roads, and public mass transit facilities. This measure would enact a 55% increase in truck weight fees and a five-cent-per-gallon increase in the fuel tax on August 1, 1990, and an additional one cent on January 1 of each of the next four years."*

Figure ES-1: Existing and Planned Regional Rail Network

This proposition represents the last time that the State of California gas tax was increased. It also established county-level "Congestion Management Agencies," or CMAs, and required each of these entities to establish Congestion Management Programs (CMPs). SANBAG became the County CMA in 1990 and approved its first CMP in 1992.

Senate Bill 45 (Kopp - 1997) made major changes to the process by which State and federal funds are allocated to individual projects statewide, with a greater focus on local control. County Transportation Commissions such as SANBAG were given the ability to program 75 percent of these funds, with the State programming the remainder for inter-regional projects and for state highway operations and maintenance. The programming is managed regionally through the Federal Transportation Improvement Program (FTIP), maintained by the Southern California Association of Governments (SCAG) through its legal designation as the Metropolitan Planning Organization (MPO).

A 30-year extension of Measure I was passed by the voters in 2004 with an unprecedented 80 percent of the vote in favor. Much of the success of that Measure could be attributed to the continued focus on congestion relief and safety, but with a greater emphasis on fixing more localized problems, such as freeway interchanges and arterial streets. The Measure also increased the county's emphasis on transit, with commitments to initiating passenger rail service to Redlands, extension of the Gold Line to

Montclair, and improvements to Metrolink service. It also set in motion the approval of a development mitigation program that all the cities in the Valley and Victor Valley implemented through development impact fees (DIFs) for partial funding of interchanges, arterials, and rail/highway grade separations.

Assembly Bill 32 (AB 32), passed in 2006, introduced a new focus on growing California in a sustainable way. As indicated on the California Air Resources Board website, "*The passage of AB 32, the California Global Warming Solutions Act of 2006, marked a watershed moment in California's history. By requiring in law a sharp reduction of greenhouse gas (GHG) emissions, California set the stage for its transition to a sustainable, low-carbon future. AB 32 was the first program in the country to take a comprehensive, long-term approach to addressing climate change, and does so in a way that aims to improve the environment and natural resources while maintaining a robust economy. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020 — a reduction of approximately 15 percent below emissions expected under a 'business as usual' scenario."* Subsequent Executive Orders by Governors Schwarzenegger and Brown have stated the need for dramatic reductions of 80% in GHG emissions from the transportation sector by 2050 and 40% by 2030.

Senate Bill 375 further increased the focus on sustainability for regions as they grow, requiring that each region, including SCAG, prepare a Sustainable Communities Strategy. As part of the six-county SCAG region, SANBAG and its local jurisdictions were partners with SCAG in crafting the first SCS, incorporated into the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy or RTP/SCS.

SANBAG is also a partner with two Air Quality Management Districts (South Coast and Mojave Desert) to attain air quality standards set by the Environmental Protection Agency. Both air basins are designated as non-attainment and the South Coast air basin is designated an "extreme" non-attainment area. Although tremendous progress has been made in cleaning the air over the last several decades, the South Coast air basin is still well short of what is needed to attain federal ozone standards by 2023 and a subsequent stricter attainment goal by 2032. This is of concern to San Bernardino County, because the path to attainment falls heavily on the transportation sector.

The County of San Bernardino and SANBAG adopted the Countywide Vision in 2011, setting in motion initiatives spanning across 10 Vision elements as described later in the CTP: Education, Environment, Housing, Image, Infrastructure, Jobs/Economy, Public Safety, Quality of Life, Water, and Wellness. This has established San Bernardino County as a sustainability leader in the region and helps guide county and city agencies in establishing and attaining sustainability goals.

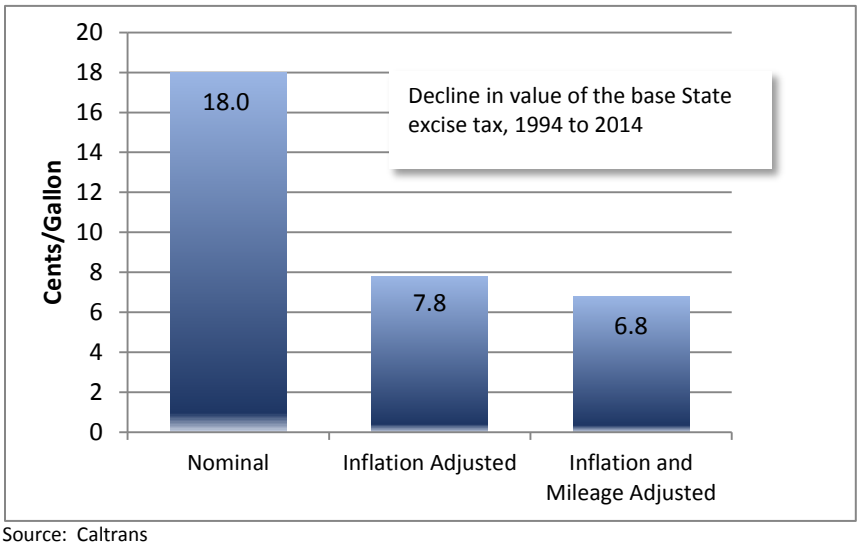
Framing the Issues

With the above as context, what types of issues will SANBAG and our partner agencies face over the horizon of this Countywide Transportation Plan, through 2040? This section highlights several of the core transportation-related issues that will need to be addressed as we move forward. These are not the only ones, but represent key areas where SANBAG should consider taking action or advocating positions.

1. **Transportation funding** – It is well known that State and federal funding levels are not keeping up with operations and maintenance needs and requirements for new or expanded infrastructure. **Figure ES-2** presents the decline in purchasing power of the state gas tax in cents per gallon. In the meantime, the population of the Inland Empire increased 63% in the 20 years from 1990 to 2010, a growth rate of 2.5% per year. Local funds now represent over 50% of transportation infrastructure revenue in San Bernardino County.

2. **Congestion relief and economic competitiveness** – Although the statewide emphasis has shifted to sustainability, the need for congestion relief cannot be ignored. We live in a globally competitive environment, in which the speed and cost of doing business still matters a great deal. It is essential that San Bernardino County maintain the transportation advantages that we currently enjoy with our robust freeway and interchange network to support the logistics industry. Some 20% of our jobs are now related to logistics, and logistics hubs will continue to play a major role in bringing business and employment to our area.

Figure ES-2: Decline in State Gas Tax Purchasing Power



Source: Caltrans

3. **System preservation and operations** – The tens of billions of dollars in street and highway infrastructure investment must be preserved. Although Caltrans and local jurisdictions are the owners and operators of our freeways and arterial streets, SANBAG can be a partner with them to ensure that these roadways and freeways are maintained and that the operations are optimized. The arterial system is dependent upon the freeway system and vice versa, therefore, routine maintenance of the entire transportation system can avoid the much larger expenditures that will be incurred from neglect. Likewise, the need for operating funds for transit is a major emerging issue and will limit transit network expansion if it is not addressed. Real-time information and technology both play a key role in maximizing system operations and efficiency.

4. **Land use** – SANBAG and local jurisdictions are aggressively promoting transit oriented development (TOD) as part of a strategy for economic growth and for achieving the regional SB 375 targets. An example is the study for the ARRIVE Corridor along the San Bernardino Metrolink line, which is exploring achievable strategies for TOD for each of the six stations along this line in San Bernardino County. The challenge with TOD in San Bernardino County has to do with market readiness. Jurisdictions cannot impose development types and densities that the market cannot yet afford. The strategy must be one of preparing for TOD, while also being patient and demonstrating commitment to rail/transit infrastructure that will attract TOD developers. Most jurisdictions with rail station assets are ready to support TOD, and some have had recent success, but they may need assistance with infrastructure investment, which was dealt a serious blow with the State's dissolution of redevelopment agencies.

5. **Transit system interconnectivity** – The transit network is growing, both regionally and in the Inland Empire and in terms of both rail and bus. Improved coordination is needed across transit

(rail, fixed route bus, and demand responsive) and ridesharing modes (carpool and vanpool) to provide a high level of customer service at an affordable cost. The telecommunications industry reminds us that successful communications is all about the network. The same is true in building the transit and ridesharing system, and we need to think in terms of interconnectivity, not independent systems.

6. **Attainment of air quality standards** – Ozone attainment in the South Coast Air Basin is at a critical juncture. As the Basin gets closer to background ozone concentrations (estimated by SCAQMD at 48 ppb), the path to attainment will require adoption of technologies and fleet turnover rates that are acknowledged by many as not feasible within the timelines prescribed by EPA. We need to push forward on air quality improvements, but at a rate that our local economy and industry can absorb, based on technologies that can be cost-effectively incorporated into the marketplace. A balanced approach is needed.
7. **Sustainability and GHG reduction** – SANBAG and our local agency partners have been leaders in regional planning for GHG reduction. The lofty goals of AB 32 and GHG-related Executive Orders now need to be translated into an approach that can achieve those goals without damaging the economy or our region's competitiveness. Recent analysis in the California Transportation Plan has indicated that land use change and expansion of transit services will produce a relatively small portion of the GHG reductions needed. The analysis indicated that radical transformation in vehicle and fuels technology will need to be the primary mechanism to produce the 80% reduction in GHGs from the transportation fleet targeted for 2050 and 40% by 2030. As with attainment for criteria pollutants, GHG reductions need to be approached in a balanced way.

CTP Key Issues

- **Transportation funding**
- **Congestion relief and economic competitiveness**
- **System preservation and operations**
- **Land use**
- **Transit system interconnectivity**
- **Attainment of air quality standards**
- **Sustainability and GHG reduction**

CTP Goals and Objectives

The CTP is San Bernardino County's long-term plan for transportation. It is focused on several over-arching goals that build on the SANBAG Mission Statement. The goals of the CTP are to:

- Improve safety and mobility for all modes of travel in San Bernardino County by residents, businesses, employees, students and visitors.
- Integrate countywide transportation plans and initiatives, to better serve the needs of the county, and to coordinate transportation systems with other counties through the Regional Transportation Plan/Sustainable Communities Strategy.
- Plan and deliver transportation projects and services in a manner that promotes the County's economic competitiveness, affordable housing, environmental quality, overall sustainability, and access by the full spectrum of system users.
- Promote stewardship of the public resources entrusted to SANBAG and other transportation agencies in the County through analysis and application of the most cost-effective approaches to delivering transportation projects and programs.
- Promote the funding of transportation needs through collaboration with local, state, federal, and private stakeholders.
- Support state, regional, and local environmental and sustainability goals.

The CTP goals are supported by an underlying set of objectives which represent the measureable means to achieve the goals. Objectives include:

- Reduce travel times for both highway and transit travel
- Maximize the efficiency and reliability of the transportation system
- Reduce vehicle hours traveled
- Reduce vehicle emissions, both criteria pollutants and GHG emissions
- Increase the share of people carpooling, bicycling, walking and taking transit
- Reduce collision rates
- Preserve existing infrastructure in a cost-effective manner
- Encourage development around existing and planned transit stations and hubs

The CTP and Its Relationship to Other Plans

The CTP needs to be understood in the context of several other plans and programs managed by SANBAG.

- The Measure I 2010-2040 Ordinance and Expenditure Plan extended the half-cent sales tax for transportation for an additional 30 years to 2040. The Expenditure Plan identifies how the Measure I revenue is to be allocated by subarea and program. The Expenditure Plan is provided in Appendix A of the Measure I Strategic Plan at http://www.sanbag.ca.gov/planning2/plan_measure-i.html.
- The Measure I 2010-2040 Strategic Plan, approved by the SANBAG Board in April 2009, specifies the policies by which the funds are to be managed. It also provides an overall funding and management strategy for Measure I. The Plan can be reviewed at the link above.
- The Measure I Strategic Plan required the development of a Ten-Year Delivery Plan. The purpose of the Delivery Plan is to define the scope, schedule and budget for projects to be developed and delivered in the early years of Measure I 2010-2040. The Delivery Plan was first approved by the Board in early 2012 and was updated in early 2014. The Delivery Plan can be found under Publications at the SANBAG home page at http://www.sanbag.ca.gov/. **Table ES-1** presents the projects included in the Delivery Plan.
- The Development Mitigation Nexus Study, approved by the SANBAG Board in 2005, identifies funding forecast to be generated from new development over the course of Measure I 2010-2040. These funds, generated primarily from transportation fees on new development, are used as part of the funding package for three types of projects in the Valley and Victor Valley: freeway interchanges, arterials, and rail/highway grade separations. The Nexus Study identifies the shares of funding for which local jurisdictions are responsible. The Nexus Study (Appendix K of the CMP) can be accessed at http://www.sanbag.ca.gov/planning2/congestion-mgmt.html.
- The Federal Transportation Improvement Program (FTIP) is a short-term listing of all transportation projects proposed over a six-year period for the SCAG region. SANBAG submits the San Bernardino County portion of the FTIP to SCAG, with major updates scheduled every even year. See the link to the FTIP at http://ftip.scag.ca.gov/Pages/2015/adopted.aspx.
- The Regional Transportation Plan/Sustainable Communities Strategy is prepared by SCAG every four years, with substantial input from County Transportation Commissions and local governments. The San Bernardino CTP is one of the primary sources of input to the RTP/SCS. The current RTP/SCS was prepared for the 2012-2035 timeframe. An update for 2016 through

2040 is scheduled for adoption by SCAG in April 2016. See http://rtpscs.scag.ca.gov/Pages/default.aspx.

Table ES-1: Ten-Year Delivery Plan Projects

Measure I Programs	
Cajon Pass Subarea Program	
I-15/I-215 (Devore) Interchange	
San Bernardino Valley Freeway Program	
I-10 Widening (HOV or Express Lanes) from LA County Line to Ford Street	
I-15 Express Lanes from Riverside County Line to I-215	
I-215 Widening from Riverside County Line to I-10	
I-10 Truck Climbing Lane from Live Oak to Riverside County Line	
SR-210 Widening from Highland Avenue to I-10	
San Bernardino Valley Freeway Interchange Program	
I-10/Cherry Avenue	I-10/Alabama Street
I-10/Citrus Avenue	I-15/Baseline Road
I-10/Tippecanoe Avenue Phase 1 & 2	I-10/Mount Vernon Avenue
I-10/Cedar Avenue	SR-60/Archibald Avenue
SR-210/Baseline Road	I-10/Monte Vista Avenue
SR-60/Central Avenue	I-10/Pepper Avenue Phase 2
I-10/University Avenue	I-10/Riverside Avenue Phase 2
I-215/University Parkway	
San Bernardino Valley Major Street Program	
North Vineyard Avenue Grade Separation (Union Pacific)	
South Milliken Avenue Grade Separation (Union Pacific)	
Glen Helen Parkway Grade Separation (Burlington Northern-Santa Fe)	
Palm Avenue Grade Separation (Burlington Northern-Santa Fe)	
Laurel Avenue Grade Separation (Burlington Northern-Santa Fe)	
San Bernardino Valley Metrolink/Passenger Rail Program	
Downtown San Bernardino Rail	
Redlands Passenger Rail	
San Bernardino Line Double Track (Preliminary Engineering)	
Gold Line to Montclair (Environmental Documentation/Preliminary Engineering)	
Valley Express Bus & Bus Rapid Transit Program	
E Street Bus Rapid Transit	
Victor Valley Major Local Highway Program	
Yucca Loma Corridor – Yucca Loma Bridge and Yates Road	
I-15/Ranchero Road Interchange	
Yucca Loma Corridor – Green Tree Boulevard Extension	
US-395 Widening from SR-18 to Chamberlaine Way	
Ranchero Road Corridor	
North Desert Major Local Highway Program	
Lenwood Road Grade Separation	

Source: SANBAG Measure I 2010-2040 Ten-Year Delivery Plan, March 2014

Summary of the CTP Analysis of Future Transportation Needs and Funding

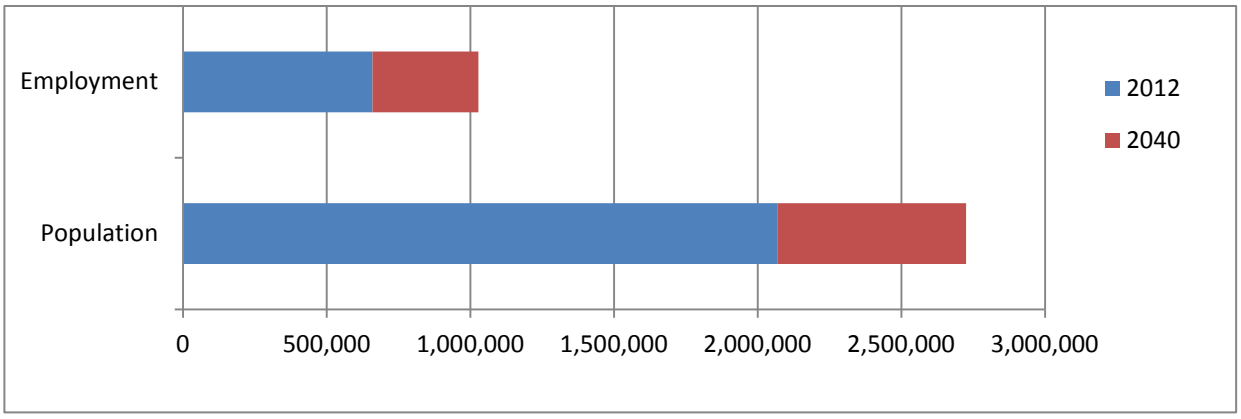
San Bernardino County is home to a world class network of freeways, arterials, freight rail lines, airports, and transit routes. This network, together with our proximity to the Ports of Los Angeles and Long Beach, is one of the primary reasons that the County has become a strategic location for logistics. However, this network must be maintained and built upon to satisfy the needs of both existing operations and future growth.

Approximately $5.4 billion (in 2015 dollars) is forecast to be collected through the life of Measure I 2010-2040

As indicated in **Figure ES-3** significant growth is anticipated in San Bernardino County through 2040. Annualized growth rates from 2012 to 2040 are 1.0 percent for population and 1.6 percent for employment, or total growth rates of 32 percent and 56 percent, respectively, over the full 28-year period.

The CTP tested two scenarios based on different levels of transportation service and forecast funding. The Baseline Scenario includes projects that can be funded with traditionally available local, Measure I, State, and federal revenue sources through 2040. The Aggressive Scenario is a needs-based scenario assuming additional sources of revenue. However, the Aggressive Scenario is also consistent with the RTP/SCS "financially constrained" plan. This includes SCAG's "innovative revenue sources" contained in the 2012-2035 RTP/SCS, a substantial increase over traditionally available funding streams. This CTP does not recommend one scenario over the other, but delineates both to illustrate the transportation projects that could be implemented and maintained in each case.

Figure ES-3: San Bernardino County Forecast Population and Employment Growth



The Aggressive Scenario includes all projects in the Baseline Scenario plus the additional projects listed. The funding assumptions include some of the major "innovative sources" included in the SCAG RTP/SCS. The Aggressive Scenario excludes certain projects that are included in the SCAG RTP/SCS that are regional in nature, such as the SCAG dedicated truck lanes on SR-60. **Table ES-2** presents a summary of the projects included in the Baseline and Aggressive Scenarios. The Baseline Scenario includes projects contained in the 10-Year Delivery Plan plus those additional projects viewed to be affordable in the forecast of traditionally available funding levels. The funding assumptions are listed on the right side of the table.

Table ES-2: CTP Scenarios

		Projects	Funding
CTP Scenarios	Baseline	**10-Year Delivery Plan Plus Constrained Projects through 2040:** • Freeway/Interchange Program (10-YDP Projects only) • I-15 Express Lanes to US-395 • I-215 North HOV lane (SR-210 to I-15) • Valley Interchange Phasing Program (constrained to revenue) or Priority 11-18 interchanges (note that priorities are being re-evaluated in 2015) • Arterial Program (constrained to revenue) • No additional grade separations • Redlands Passenger Rail Project • Gold Line to Montclair • Metrolink double track (CP Lilac to CP Rancho) • Metrolink expansion (50 daily trains) • Active Transportation Projects supportable by grants and Transportation Development Act funds • West Valley Connector Express Bus • Foothill/5th Express Bus	**Core Revenues, Financially Constrained Traditional sources:** • Measure I Forecast revenue in 10-YDP • State revenues constrained to gas tax collections • Federal revenues constrained to gas tax collections • Tolls for express lane scenario • Transit revenue adequate to cover current operations held at 3% • Mitigation fees
	Aggressive	**Baseline Projects Plus the Following:** • Freeway Improvements o Full Buildout of I-215 from I-10 to SR-60 (including I-215/Washington-Mt Vernon interchange) o I-215 mixed flow lane from SR-210 to I-15 o Completion of I-10 to Riverside Co. Line with HOV or Express Lanes o SR-210 HOV lane from I-215 to I-10 o I-15 Express Lanes from US-395 to High Desert Corridor o I-10/I-15 Express Lane Connectors • Interchange Program Buildout • Arterial Program Buildout • All Nexus Study Grade Separations • Additional Alameda Corridor East Grade Separations • Additional rail projects (i.e. Redlands Rail Phase 2) • Additional Metrolink double track segments • BRT (West Valley Connector, Foothill-5th) • Express Bus (Remaining key transit corridors) • Non-Motorized Transportation Plan buildout (Secondary Active Transportation Projects) • Goods movement projects (truck climbing lanes, Intermodal access improvements) • East-West Freight Corridor (regional project) • High Desert Corridor (public and/or private funding) • Passenger Rail to Ontario Airport	**Match Funding to Infrastructure Need Potential options:** • Tolls for express lane scenario • Supplemental Measure I • State and Federal gas taxes indexed to be on par with current authorizations with inflation • Regional/State/Federal VMT fee (or equivalent) • Aggressive assumptions for State Bonds/Federal Stimulus • Prop 1B-type infusion every 10 years • Federal freight dollars

The performance of the transportation system is presented in **Table ES-3**. This analysis was generated using the San Bernardino Transportation Analysis Model (SBTAM), which is a focused sub-model derived from the SCAG regional model. SBTAM includes the same network as in the 6-county SCAG region, but with additional detail in San Bernardino County. The results show a substantial reduction in vehicle hours of travel and savings in delay within San Bernardino County for the Baseline Scenario. A savings of 100,000 vehicle hours per weekday would equate to over $400 million in delay savings per year, based on the value of time alone (typically in the range of $15 per hour).

Table ES-3: Forecast 2040 San Bernardino County Daily Performance Statistics

Measure of Effectiveness	2012	2040 No Build	2040 Baseline	Percent Change from 2040 No Build	2040 Aggressive	Percent Change from 2040 No Build
Vehicle Miles Traveled	56,462,829	81,122,010	82,662,578	1.9%	82,945,126	2.2%
Vehicle Hours Traveled	1,203,423	2,029,243	1,907,230	-6.0%	1,886,904	-7.0%
Vehicle Hours of Delay	140,982	476,229	349,896	-26.5%	274,436	-42.4%
Average Speed (mph)	46.9	40.0	43.3	8.4%	44.0	9.9%

Source: SBTAM

Summary of the CTP Transportation Strategy

There are two parts to SANBAG's transportation strategy: a set of overarching principles, coupled with individual strategies by geographic area, mode, and function.

Overarching Principles

- **Customer focus** – SANBAG and other public agencies exist to serve their traveling "customers." Customers extend across all auto, transit, truck, and non-motorized modes.
- **Partnership-building** – SANBAG is part of a multi-agency team to deliver mobility and safety improvements to our customers. Other important parts of the team include Caltrans, transit agencies, local jurisdictions, SCAG, air quality management districts, and the private sector. Good communication and collaboration is essential for each agency to accomplish its part of the overall mission.
- **Stewardship** – The public has entrusted resources to SANBAG and other transportation-related agencies. We must be good stewards of both the limited financial resources available and the environmental resources we need to preserve as the system is built.
- **Cost-effectiveness** – Investments should be made in a way that maximizes the benefits derived from the available resources, with due attention given to geographic equity.
- **Economic competitiveness** – The transportation system exists to enable the businesses and residents of San Bernardino County to thrive. Our continued investment in transportation efficiency will enhance San Bernardino County as a business location.
- **Delivering on commitments** – Commitments are made at multiple levels, but major ones include: delivering the range of projects reflected in the Measure I Expenditure Plan; equitably distributing State, federal, and Measure I funding to the county's transit agencies and local jurisdictions; supporting implementation of the San Bernardino Countywide Vision; fulfilling commitments in the Sustainability MOU with SCAG; and supporting other statewide sustainability goals while fostering economic growth.
- **System preservation** – SANBAG and its agency partners need to work together to estimate maintenance needs and seek the funding needed to preserve/operate capital investment in highways and transit systems.

Individual Strategies

Individual strategies can be grouped into three primary categories:

- Geographic
- Modal
- Functional

Table ES-4 presents proposed SANBAG strategies for the modal, functional and geographic categories incorporated into the Strategic Plan. Modal categories have been nested into the primary geographic subareas of the Measure I Strategic Plan. The primary challenge or challenges associated with each component are identified, along with corresponding strategies that address the challenges.

Table ES-4: Summary of Long-Term Transportation and Sustainability Strategies

Category	Challenge	Strategy
Valley Categories by Mode		
Freeway system	Forecasts show that the system will be highly congested by 2040. Funding for capacity and operational enhancements to the system is expected to be constrained.	Position the freeway system to adapt to future demands by using a managed lane approach and improved traffic management and information systems across all freeways.
Freeway interchanges	Projected Measure I, state, and federal funds will be insufficient to meet all the interchange improvement needs.	Spread Measure I funds across interchange hot-spots using both a phased approach and right-sizing of full interchange improvements. Look to a future Measure I, state, and federal funds to complete the freeway interchange program.
Rail/highway grade separations	Projected Measure I, state, and federal funds will be insufficient to build all the grade separations identified.	Prioritize additional grade separations and proceed with project development on at least two projects, to take advantage of potential future freight funding opportunities.
Arterials	Arterial project construction has lagged original expectations.	Encourage jurisdictions to accelerate arterial improvement projects and continue policy flexibility for funding development shares. SANBAG will identify arterial improvements that are particularly important to route continuity.
Passenger Rail	Stations along the Metrolink San Bernardino Line and the Redlands Rail corridor are our most significant opportunities for transit oriented development and transit-related economic growth. Funds for rail services are limited, and Metrolink costs are increasing faster than available funding.	To encourage investment, jurisdictions along these corridors need assurances from SANBAG/Metrolink that service can be maintained and, ideally, expanded. Develop a sustainable funding plan, and integrate operations for these corridors wherever possible. Position Metrolink capacity-enhancement projects for future implementation funding.
Gold Line	Timing of extension of Gold Line to Montclair and beyond is uncertain, and issue of overlapping Metrolink/Gold Line/ONT corridors needs to be resolved.	Develop an integrated operational/funding solution for Gold Line and Metrolink in coordination with LA Metro, Metrolink, and local jurisdictions.

Table ES-4: Summary of Long-Term Transportation and Sustainability Strategies, Continued

Category	Challenge	Strategy
Valley Categories by Mode, Continued		
Transit Connection to ONT	The City of Ontario is negotiating for the transfer of control of Ontario International Airport to the City. The region would benefit from improved transit access for passengers and employees.	Take a phased approach to transit access to ONT, beginning with shuttle service from the Metrolink Rancho Cucamonga station, with a possible longer term solution emerging from corridor-level analysis.
Bus Rapid Transit (BRT)	The cost of building all the BRT corridors in the Long Range Transit Plan far exceeds available funding. The proper technology solution to carry across future express bus/BRT corridors also needs to be resolved.	Reevaluate the Express Bus/BRT strategic plan, to determine how premium transit should be staged and funded across the Valley. The plan should address corridor priorities, phasing, technology, and funding options, providing information for the Board to decide on the appropriate BRT/Arterial funding split by 2020.
Fixed-route bus service	Sustainable funding for operations is the biggest challenge.	Study the challenges of the trajectory of transit operations funding, and jointly develop solutions between SANBAG and Omnitrans.
Airports	Passenger service has declined significantly at ONT over the past decade, attributed in part to current management policies.	Support Ontario and the region in the effort to regain local control of ONT, and make ONT, SBIA, and SCLA more competitive as destinations for passengers and freight.
Active Transportation	Large funding needs for building out the cycling/walking network	Continue to submit competitive grant applications to support implementation of the Non-motorized Transportation Plan (NMTP). • Maintain and update the NMTP • Identify and pursue grant funding opportunities to expand cycling and walking infrastructure
Demand-responsive bus service	Demand-responsive service is the highest cost form of transit, but important in serving certain senior and disabled transit riders. Under the Americans with Disabilities Act, transit operators are required to provide paratransit service within ¾-mile of fixed routes for passengers with disabilities who cannot ride fixed-route service.	Continue assistance programs, such as helping demand-responsive riders use fixed-route systems and coordination with non-profit entities while also maintaining demand-responsive service.
Transit integration and inter-connectivity	Transit services could be better coordinated across systems in terms of ease of transfers, fare media, and first/last mile connections. This will be even more important as the system grows.	Take a more integrated, customer-focused approach to the provision of transit services. Facilitate seamless ticketing and better connection at existing transit centers and connection points.
Mountain/Desert Strategies		
Victor Valley highway projects	Growth forecasts show a near doubling in traffic volume by 2040.	Prioritize projects that will provide the most cost-effective congestion reduction benefit, designating projects for Major Local Highway funding through the subarea process. Continue to advocate the High Desert Corridor as a P3 project.

Table ES-4: Summary of Long-Term Transportation and Sustainability Strategies, Continued

Category	Challenge	Strategy
Mountain/Desert Strategies, Continued		
Mountain/Desert fixed route transit	Funds are limited for route expansion and adjustment as the Victor Valley grows.	Study the challenges of the trajectory of transit operations funding, and jointly develop solutions between SANBAG and the Mountain/Desert transit agencies.
Mountain/Desert demand-responsive bus service	Demand-responsive service is the highest cost form of transit, but important in serving certain senior and disabled transit riders.	Continue assistance programs, such as helping demand-responsive riders use fixed-route systems and coordination with non-profit entities while also maintaining demand-responsive service.
Mountain Subarea	Though baseline population is small, major congestion occurs on weekends, particularly winter weekends, limiting economic growth.	Conduct a study of bottleneck locations and lower-cost improvements that could reduce weekend congestion levels and prioritize funding for those projects.
Morongo Basin	The Basin is steadily growing, and SR-62 is the only viable transportation route through Yucca Valley and Twentynine Palms.	Implement improvement projects identified through the Morongo Basin Area Transportation Study (MBATS).
North Desert	The North Desert has major highway needs, but limited funding.	Evaluate long-term priorities for project investments in the subarea.
Colorado River	Funds are extremely limited for improvements in this subarea.	Smaller-scale, affordable improvements should be investigated and prioritized by the subarea.
Functional Categories		
Highway Maintenance and Operations	Highways are facing serious future maintenance funding shortfalls. Local jurisdictions are responsible for arterial maintenance while Caltrans is responsible for freeway and state highway maintenance.	Conduct a strategic planning study with Caltrans and regional agencies to assess maintenance/operations funding needs and approaches to managing costs.
Rural Highway Needs	Rural areas require unique maintenance/safety/funding consideration.	Focus on cost effective maintenance and support for funding streams that the County and Caltrans can utilize to maintain these rural highways.
Transit System Maintenance and Operations	Existing transit systems are facing potentially serious future operations funding shortfalls.	Optimize transit operations and identify mechanisms to fund future system operations and expansion.
Air Quality	Although air quality has dramatically improved over the last several decades, attainment of the next set of ozone standards will be extraordinarily challenging and costly.	Work with regional and state agencies and the private sector to meet attainment standards on an achievable timeline that does not adversely impact the economy. Advocate for state/federal investment that facilitates this progress. Focus on market-based mobile source technology improvements and fleet turnover as a win-win approach.
Sustainable Growth	The state's GHG reduction goal of 80% by 2050 is an enormous challenge. If not done carefully, it may undermine the economy to the point where it will be impossible to afford the technology improvements needed to achieve this goal.	Assist state/regional agencies and the private sector in technology research and implementation strategies that are technologically feasible and cost-effective (per AB 32) for San Bernardino County. Implementation should follow the natural course of vehicle life cycles and fleet turnover, to the extent possible.

Table ES-4: Summary of Long-Term Transportation and Sustainability Strategies, Continued

Category	Challenge	Strategy
Functional Categories, Continued		
Habitat Conservation	Habitat conservation currently occurs on a project-by-project basis, generally without a comprehensive approach.	Continue with development of the Habitat Preservation/Conservation Framework as a win-win approach for selected geographic areas.
Freight	Forecasts show freight volume through the ports tripling by 2040, placing extreme demands on the transportation system.	Continue building out the freeway system, interchanges, and grade separations. Work closely with the private sector to understand changes in technology and freight operations and how the transportation system can best accommodate those changes. Construct all the freight projects in the California Freight Mobility Plan, to the extent funding allows.
Health	Public health is being integrated into policy frameworks throughout state, regional, and local governments. The challenge in the transportation arena is to determine how to incorporate health considerations into decision-making frameworks.	Continue to build on health partnerships already established. Continue focus on transit mobility and developing the active transportation network to promote cycling and walking.
Transportation revenue	The federal Highway Trust Fund and state gasoline/diesel taxes continue to lose purchasing power, resulting in lower revenues for transportation agencies and local jurisdictions.	Provide input to regional and statewide discussions and pilot projects on the generation of additional revenue for transportation. Construct a set of revenue generation options that can be evaluated by the SANBAG Board, with input from a wide range of stakeholders.

The CTP is a living document that will be updated in concert with future RTP/SCS updates. Future versions of the CTP will monitor the performance of the various strategies and refine the financial outlook, projects lists and future actions necessary to ensure safe and efficient of people and goods throughout San Bernardino County.

I. Introduction

SANBAG Background

San Bernardino is a diverse county that encompasses approximately 20,000 square miles with approximately 2.09 million residents

San Bernardino Associated Governments (SANBAG) is the Council of Governments (COG) and transportation planning agency for San Bernardino County. SANBAG is responsible for cooperative regional planning and furthering an efficient multi-modal transportation system countywide. As the County Transportation Commission (CTC), County Transportation Authority (CTA), Service Authority for Freeway Emergencies (SAFE) and Congestion Management Agency (CMA), SANBAG supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, congestion management efforts, active transportation efforts, and long-term planning studies. SANBAG also administers Measure I, the half-cent transportation sales tax approved by county voters in 1989.

Since its creation in 1973, SANBAG has performed transportation and regional planning services within the largest county in the contiguous United States. San Bernardino is a diverse county that encompasses approximately 20,000 square miles with approximately 2.09 million residents. Refer to **Figure I-1** for the geographic coverage of San Bernardino County, which is also the subregion for which SANBAG has responsibility.

SANBAG Responsibilities

SANBAG was formed in 1973 by joint powers agreement of the cities and the County of San Bernardino. SANBAG is governed by a Board of Directors consisting of a mayor or designated council member from each of the twenty-four cities in San Bernardino County and the five members of the San Bernardino County Board of Supervisors.

In addition to SANBAG, the composition of the SANBAG Board of Directors also serves as the governing board for the separate legal entities listed earlier.

- The San Bernardino County Transportation Commission (CTC) is responsible for short and long range transportation planning within San Bernardino County, including coordination and funding of public mass transit service, approval of capital development projects for public transit and highway projects, and identification of staging and scheduling of project development and construction relative for transportation projects in the Transportation Improvement Program.
- The San Bernardino County Transportation Authority is responsible for administration of the voter-approved half-cent transportation transactions and use tax levied in the County of San Bernardino.

- The Service Authority for Freeway Emergencies is responsible for the administration and operation of a motorist aid system of call boxes on State freeways and highways within San Bernardino County.
- The Congestion Management Agency analyzes the performance level of the regional transportation system in a manner which ensures consideration of the impacts from new development and promotes air quality through implementation of strategies in the adopted air quality plans.

As a Subregional Planning Agency, SANBAG represents the San Bernardino County subregion and assists the Southern California Association of Governments (SCAG) in carrying out its functions as the metropolitan planning organization (MPO). SANBAG performs studies and develops consensus relative to regional growth forecasts, regional transportation plans, and mobile source components of the air quality plans.

Figure I-1: San Bernardino County and SANBAG Subregion

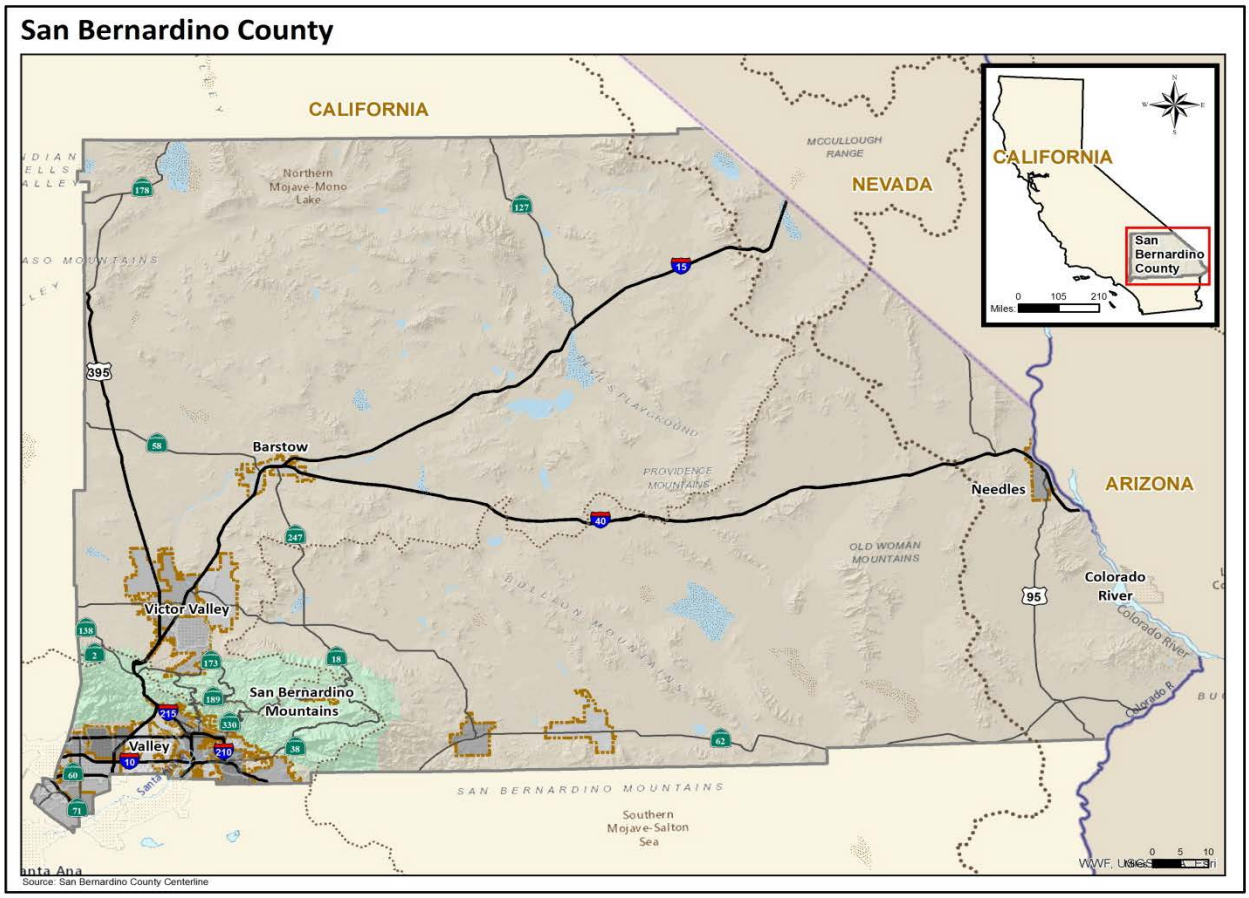


Figure I-2: SANBAG Range of Activities

Freeways
- Expand freeway capacity
- Maximize efficiency of freeway system
- Provide freeway service patrol
- Maintain call box system

Roads
- Provide funding for local jurisdictions to improve local arterials and roads, including signal coordination
- Maintain the continuity of the Nexus Study arterial network
- Identify and support safety programs to infrastructure such as roadway/rail grade separation projects

Transit
- Support Metrolink
- Support fixed route bus service
- Support van pools

Transportation Demand Management/ Non-Motorized Transportation
- Implement rideshare and other demand management services
- Provide funding for local jurisdictions to implement and expand bicycle facilities and infrastructure

Sustainability
- Administer Property Assessed Clean Energy HERO Program
- Prepare growth forecasts
- Maintain 511 Motorist Aid Traveler Information System
- Manage park and ride lots
- Support alternative fuel and air quality improvement programs

Measure I

In 1989, San Bernardino County voters approved a half-cent transportation sales tax to provide funding for much-needed transportation infrastructure. Upon sunset of Measure I 1990-2010, the sales tax had generated $1.8 billion for transportation infrastructure projects throughout the County.

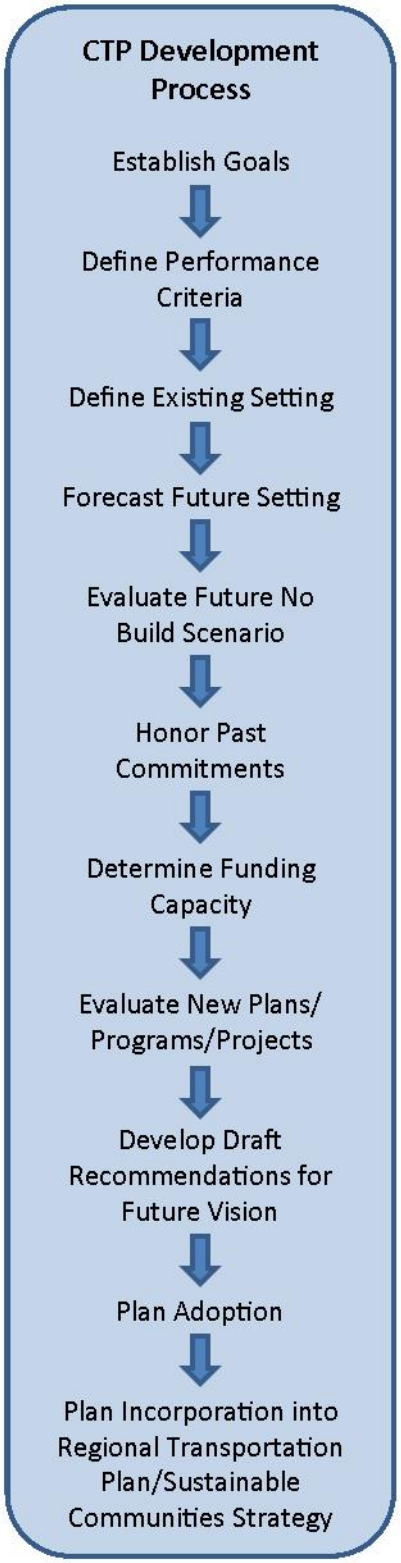
The success of Measure I led in 2004 to its extension by voters through 2040. The Measure I 2010-2040 Strategic Plan was approved by the SANBAG Board on April 1, 2009 as the official guide and reference for the allocation and administration of the combination of Measure I funds, State and federal transportation revenues, and private fair-share contributions to regional transportation facilities from new development.

The success of the initial sales tax measure led to the extension by voters of the sales tax measure in 2004 through 2040

Ultimately, growth in Measure I revenue is dependent on a strong economy.

The Strategic Plan covers the horizon period of the long-range CTP. The Strategic Plan contains a set of overarching principles to guide implementation. These principles included:

1. Deliver all Expenditure Plan projects at the earliest possible date.
2. Seek additional and supplemental funds as needed for completion of all Expenditure Plan projects.
3. Maximize leveraging of State, federal, local, and private dollars.
4. Ensure use of federal funds on otherwise federalized projects.
5. Sequence projects to maximize benefit, minimize impact to the traveling public, and support efficient delivery.
6. Provide for geographic equity over the life of the Measure.
7. Recognize that initiation of project development work on arterial, most interchange, and railroad crossing projects is the responsibility of local jurisdictions. Initiation of project development work on freeway mainline projects and interchange improvements required for the mainline projects is the responsibility of SANBAG.
8. Work proactively with agency partners to minimize the time and cost of project delivery.
9. Structure SANBAG to effectively deliver the Measure projects.
10. Exercise environmental stewardship in delivering the Measure projects.
11. Periodically update the Strategic Plan through the life of the Measure.
12. Utilize debt financing when and where appropriate.



Countywide Transportation Plan (CTP) Development

SANBAG serves as the state-designated transportation planning and programming agency for San Bernardino County and as such is responsible for development of a long-range vision for the transportation system. The vision must be accountable and sensitive to local issues and needs as well as considering regional needs. This vision will be outlined in this Countywide Transportation Plan (CTP) which will promote the maintenance and development of San Bernardino County's transportation infrastructure. The CTP also identifies the preferred transportation investment policies and programs, levels of funding and funding strategies needed to address the sustainability and economic concerns of the County.

Prior to the development of a future roadmap, a clear assessment is needed of the existing setting from which a comprehensive strategy can be crafted based on forecast needs. The CTP identifies and presents a sustainable long-term plan to ensure mobility for the county's residents, businesses, workers and visitors. The flow chart above depicts the CTP development

process. The CTP is closely linked with the Measure I Strategic Plan which was developed to define the policy framework for delivery of the projects and Programs referenced in the Measure.

The CTP considers a range of projects and programs to satisfy future mobility needs. The CTP tested two scenarios based on different levels of transportation service and forecast funding. The Baseline Scenario includes projects that can be funded with traditionally available local, Measure I, State, and federal revenue sources through 2040. The Aggressive Scenario is a needs-based scenario assuming additional sources of revenue. However, the Aggressive Scenario is also consistent with the RTP/SCS "financially constrained" plan. This includes SCAG's "innovative revenues sources" contained in the 2012-2035 RTP/SCS, a substantial increase over traditionally available funding streams. This CTP does not recommend one scenario over the other, but delineates both to illustrate the transportation projects that could be implemented and maintained in each case.

Key to development of a long-range vision is a critical review of available resources to implement future plans and programs. Revenue forecasts were reviewed for the life of the CTP coinciding with the horizon of Measure I 2010-2040. Revenue streams from local, state and federal sources were identified and estimated. In order to develop a plan that can be funded, plan and program costs were estimated to ensure the long-range transportation vision can be sufficiently funded.

CTP Goals

The development of the CTP was focused around several over-arching goals. The goals build off of the SANBAG Mission Statement and focus on the development of a multi-modal plan that addresses existing and future infrastructure needs and deficiencies in a cost effective manner. The goals of the CTP are to:

- Consolidate and integrate countywide transportation and land use planning efforts to provide more consistent input into the Regional Transportation Plan/Sustainable Communities Strategy
- Improve safety and mobility for all modes of travel in San Bernardino County by residents, businesses, employees, students and visitors
- Deliver transportation projects and services in a manner that promotes the County's economic competitiveness, affordable housing, environmental quality, overall sustainability, and access by the full spectrum of system users
- Promote stewardship of public resources entrusted to SANBAG and other transportation agencies in the County through cost-effective delivery, maintenance, and operation of transportation projects and services, and prudent use of taxpayer dollars
- Promote the planning and funding of a sustainable transportation system through a collaborative process with local, regional, state, federal, and private stakeholders

CTP Considerations

- Quantity and distribution of growth
- Nature and sequencing of major highway and transit projects
- Financial constraints to infrastructure investment
- Approaches to addressing County's air quality problem
- Long term funding options necessary to support the County's infrastructure and sustain its economic future

The long-range plan for San Bernardino County has historically been embedded within the SCAG RTP, without a separate countywide

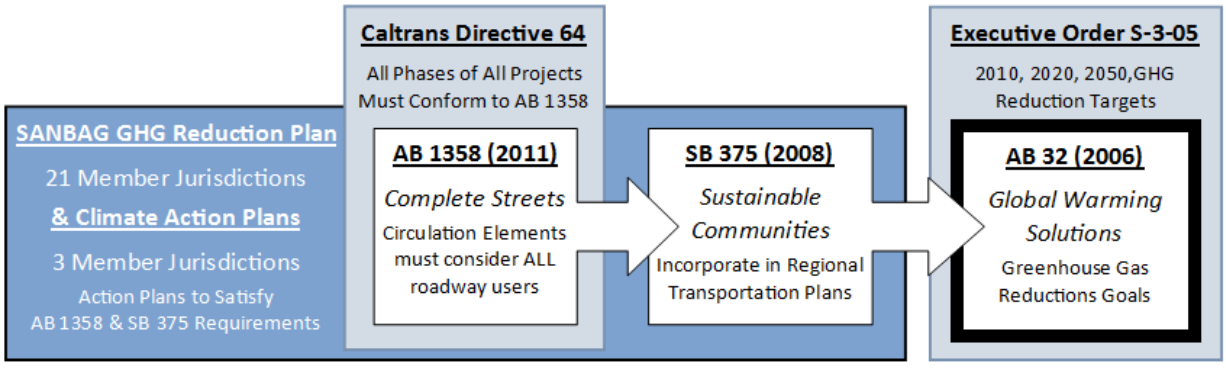
plan. However, given the complexity of today's issues and the growth of the County, a more detailed level of analysis is required to support effective decision making from a San Bernardino County perspective. The development of this CTP affords SANBAG and agency partners the opportunity to better define and take positions on a wide range of current issues.

The CTP goals are supported by underlying objectives which are smaller and measureable means by which the goals can be achieved. Objectives include reducing travel times, maximizing efficiency of the transportation system, reducing vehicle hours traveled, reducing vehicle emissions, increasing the share of people carpooling, bicycling, walking and taking transit, reducing transit vehicle wait times, reducing accidents, improving freeway, arterial and transit vehicle speeds, etc.

CTP Relationship to Countywide/Regional Planning Efforts

The CTP must respond to infrastructure and transportation service needs of the county's citizens and businesses as well as legislation incorporated into the planning process. The CTP will serve as the input for San Bernardino County into the Regional Transportation Plan/Sustainable Community Strategies (RTP/SCS). The RTP/SCS is developed every four years by SCAG as a blueprint for the region guiding infrastructure development. The RTP/SCS includes projects and programs that serve specific mobility needs. The RTP/SCS must be consistent with State and federal legislation where applicable. The RTP provides input into the Federal Transportation Improvement Program (FTIP) which is updated every two years and includes all transportation-related projects requiring state and federal funding or approval by state and federal transportation agencies. Legislation incorporated into the RTP/SCS includes:

- Executive Order of the Governor of California S-3-05 (defined 2010, 2020 and 2050 GHG reduction targets, signed on June 1, 2005)
- Assembly Bill 32 (AB 32)
- Senate Bill 375 (SB 375)
- Assembly Bill 1358 (AB 1358)
- California Environmental Quality Act (CEQA)
- Moving Ahead for Progress for the 21st Century (MAP-21)



San Bernardino has six acres of park land for every 1,000 residents, twice the state standard.

Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006 set 2020 greenhouse gas (GHG) emissions reduction goals into law. It directed the California Air Resources Board (CARB) to develop actions to reduce GHG emissions. Senate Bill (SB) 375, the Sustainable Communities and Climate Protection Act of 2008 enhances California's ability to reach its AB 32 goals by promoting good planning with the goal of more sustainable communities. SB 375 defines specific regional GHG reduction targets and requires each Metropolitan Planning Organization (MPO) to complete a Sustainable Communities Strategy (SCS) and integrate this into the RTP. SANBAG has executed a Sustainability MOU with SCAG demonstrating the agency's commitment to the SCS by assisting SCAG in meeting the GHG region-wide targets.

AB 1358, the Complete Streets Act, requires cities and counties, when updating the circulation element component of the general plan, to account for the needs of all roadway users. At the same time that AB 1358 was enacted in 2011, the California Department of Transportation (Caltrans) released Deputy Directive 64 which embraces Complete Streets as the policy covering all phases of state highway projects from planning to construction to maintenance and repair. The directive reinforces the inter-relationships of the local and regional multi-model systems.

SANBAG recently completed the Regional GHG Reduction Plan in response to AB 32 and SB 375 requirements. The Regional GHG Reduction Plan compiled an inventory of GHG emissions and developed reduction measures that could be adopted by the partner cities and San Bernardino County. Of the 24 cities throughout the county, 21 participated in the regional plan while one other city and the County of San Bernardino previously adopted local Climate Action Plans (CAP).

Infrastructure projects must comply with the California Environmental Quality Act (CEQA) to protect the environment. Projects must assess environmental impacts associated with implementation and mitigate those impacts to ensure the protection of our natural environment.

In 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) was enacted as the federal transportation bill that dictates surface transportation funding. MAP-21 is the successor transportation bill to the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and is a two-year bill. The surface transportation bill outlines the various transportation programs and funding levels from the federal government.

Countywide Vision Statement

We envision a complete county that capitalizes on the diversity of its people, its geography, and its economy to create a broad range of choices for its residents in how they live, work, and play.

We envision a vibrant economy with a skilled workforce that attracts employers who seize the opportunities presented by the county's unique advantages and provide the jobs that create countywide prosperity.

We envision a sustainable system of high-quality education, community health, public safety, housing, retail, recreation, arts and culture, and infrastructure, in which development complements our natural resources and environment.

We envision a model community which is governed in an open and ethical manner, where great ideas are replicated and brought to scale, and all sectors work collaboratively to reach shared goals.

From our valleys, across our mountains, and into our deserts, we envision a county that is a destination for visitors and a home for anyone seeking a sense of community and the best life has to offer.

Locally, individual jurisdictions prepare General Plans or may conduct additional vision plans to address land use and infrastructure needs at the local level. General Plan circulation elements define long-range local transportation projects that may ultimately be incorporated into the CTP.

San Bernardino County, in cooperation with SANBAG, prepared a Vision for the county with the goals of partnering with all sectors of the community to support the success of every child from cradle to career and to establish San Bernardino County as a model in the state where local government, regulatory agencies and communities are business friendly. Aging population needs must also be considered during the post-career timeframe as the aging population continues to grow. The Countywide Vision focuses on the following elements, many of which have a direct correlation to the CTP:

- Jobs/Economy
- Education
- Housing
- Public Safety
- Infrastructure
- Quality of Life
- Environment
- Water
- Wellness

Components of the Countywide Vision are interwoven into the CTP. Although the Vision focuses on social, economic and political drivers to shape our future, there are linkages to the development and maintenance of the transportation system. For instance, it considers recreational trails, goods movement, aviation and clean transportation modes, recognizing that innovative planning is required to improve access to and the quality of the infrastructure systems. Availability of alternative modes of transportation such as bicycle and pedestrian infrastructure along with public transit opportunities has been shown to relate directly to wellness and improved public health.

Vision Survey

Top Three Likes about SB County:
- Availability of recreational facilities
- Availability of affordable housing
- Availability of restaurants/shopping

Top Three Dislikes about SB County:
- Lack of employment opportunities
- Overall county image
- Quality of roads

As part of the Visioning process, an online survey was performed with over 3,650 respondents. Availability of jobs and quality of roads were at the top of the list of things respondents disliked most about the county. Respondents believe that traffic congestion and quality of roads are getting worse rather than improving while nearly half or more than half believe that air quality, availability of other transportation options and availability of public transit are remaining the same. The top suggestion for improvements in the County was related to transportation infrastructure. The CTP's transportation strategy supports the Countywide Vision.

SANBAG has prepared several planning documents that support the CTP. These include the Non-Motorized Transportation Plan (NMTP), the Long-Range Transit Plan (LRTP) and the Victor Valley Area Transportation Study (VVATS). The NMTP identifies active transportation opportunities and constraints throughout the County and identifies a bicycle plan. The LRTP evaluates existing and planned transit service, identifies existing and forecast deficiencies, and proposes a course of action for planning and implementation of future transit investments. VVATS evaluated long-range transportation infrastructure needs throughout the Victor Valley. Various other topics are addressed by the CTP, including:

- Congestion Management
- Environmental Impacts
- Corridor Preservation
- Goods Movement
- Infrastructure Maintenance
- Transit Needs
- Advanced Technology and Alternative Fuels
- Market Incentives

The California Transportation Plan is a statewide, long-range transportation policy plan to address California's future multimodal mobility needs and reduce GHG emissions. The plan defines performance-based goals, policies and strategies to achieve the state's collective vision for an integrated and sustainable multimodal transportation system. The keys to the vision are the three E's of sustainability; a prosperous economy, human and environmental health and social equity. The primary goals of the plan are to:

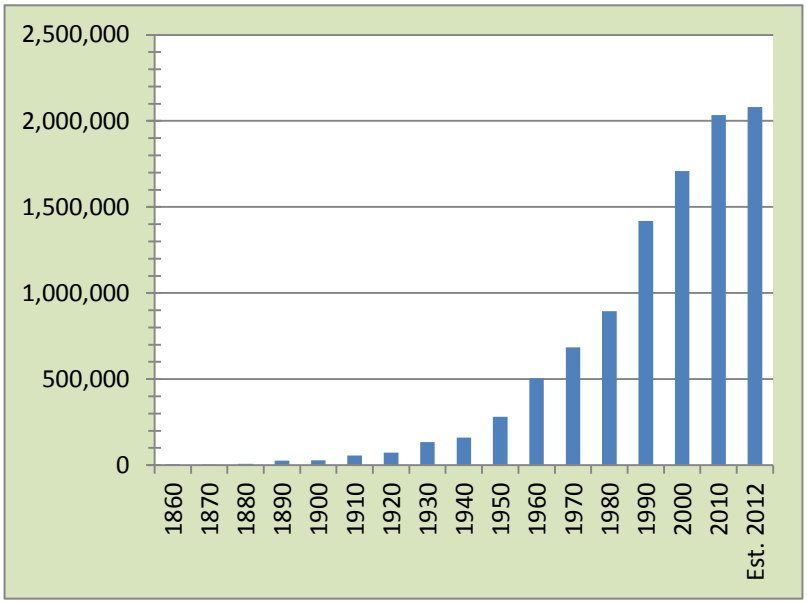
- Improve multimodal mobility and accessibility for all people
- Preserve the multimodal transportation system
- Support a vibrant economy
- Improve public safety and security
- Foster livable and healthy communities and promote social equity
- Practice environmental stewardship

The SANBAG CTP builds off of the core goals of the state plan, focusing on local policies and objectives that will help achieve these goals locally.

II. State of the Subregion

The past few decades have seen rapid growth throughout San Bernardino County (refer to **Figure II-1)**. Along with this population growth, the transportation system has matured and expanded to continue to serve mobility needs throughout the County. Challenges continue to exist in maintaining and expanding the transportation system to serve the needs of current and future users.

Figure II-1: San Bernardino Historic Population



Physical Environment

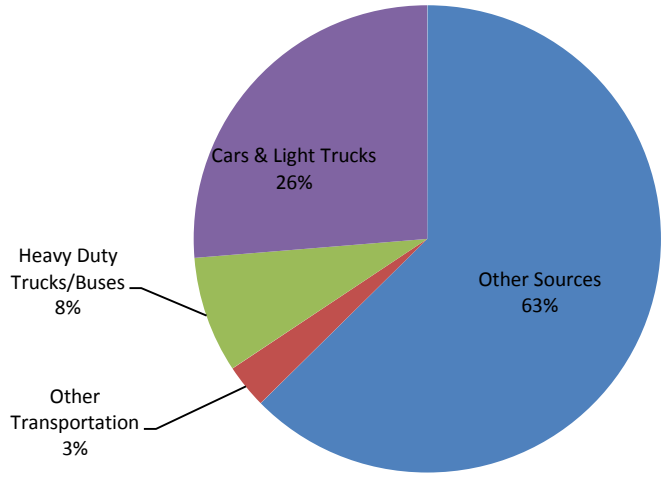
San Bernardino County is the largest county in the contiguous United States covering over 20,000 square miles of land. The County includes 24 incorporated cities with the population focused primarily in the southwestern portion of the County. Over 80% of the unincorporated land throughout the county is owned by governmental or tribal agencies. San Bernardino County is geographically located between Los Angeles County and the Arizona border (Refer to **Figure I-1**). This strategic geographic location has resulted in an extensive roadway and rail network serving local, regional and national travel markets. Existing development of the County's transportation infrastructure is rooted in the county's varying topography. The San Bernardino Mountains separate the Valley from the desert areas, and much of the transportation system and land development grew around the rail infrastructure as it followed the topography. This resulted in:

- Major transportation corridors (rail and highway) through mountain passes (Cajon to the north and Banning to the east)
- Urban areas in the most populated communities of the southwest county
- A growing Victor Valley comprised of four cities with expansive residential and supporting commercial development
- Resort communities in the San Bernardino Mountains and along the Colorado River
- Vast desert areas with scattered rural communities
- Unique mining resources in open desert spaces,
- Significant natural resources such as Joshua Tree National Park and Mojave National Preserve, and major U.S. Army and Marine training and material depots

Environmental Setting

San Bernardino County is blessed with vast environmental resources and recreational opportunities. The San Bernardino National Forest is a nationally significant eco-system and home to an array of wildlife. The deserts support habitats and species, such as the desert tortoise and Joshua Trees that have provided some of the signature images of the County over the years. The Mojave River and Santa Ana River basins are not only major drainages but support several federally or state-listed threatened and endangered species.

Figure II-2: Percentage of 2011 Greenhouse Gas Emissions in California



Source: CARB

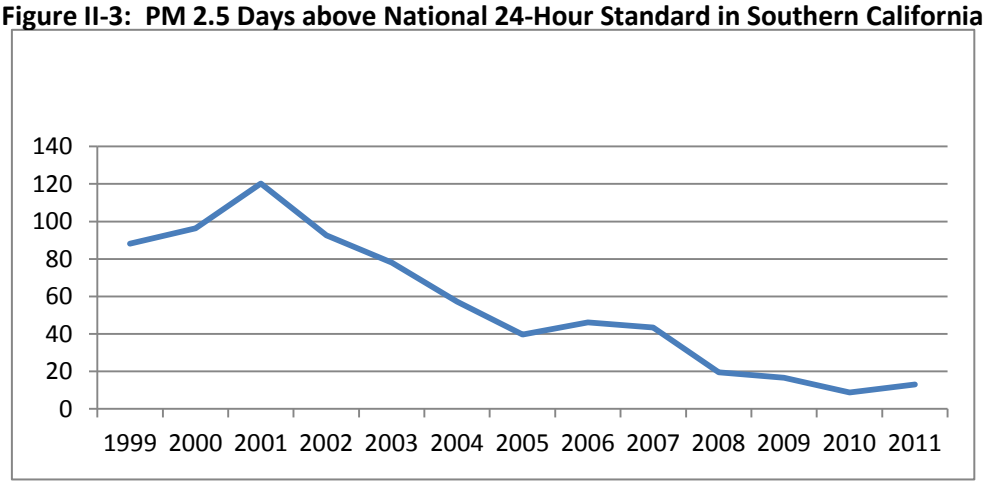
San Bernardino County has also been known for its air quality challenges. Although tremendous progress has been made on air quality improvement in the last several decades, the county remains one of the more polluted regions of the U.S. There is a distinct relationship between transportation and air quality and long-term exposure to high concentrations of air pollutants has been linked to breathing and heart problems. Transportation is a major contributor to criteria pollutants such as particulate matter (PM) and oxides of nitrogen (NOx), a precursor to ozone formation. Transportation is also responsible for close to 40% of the greenhouse gas (GHG) emissions statewide (Figure II-2). It is important to note that clean air has positive health impacts on the county's population.

San Bernardino County is located within two air basins: the South Coast Air Basin and the Mojave Desert Air Basin. While both Air Basins have seen dramatically improved air quality, as presented in Figure II-3, additional strategies must be implemented to meet the standards set by the Environmental Protection Agency. This CTP must be developed recognizing that San Bernardino County will need to assist the region in attaining national air quality standards as well as meeting state GHG reduction targets.

SB 375 has mandated reductions in greenhouse gas emissions from automobiles and light duty trucks through regional Sustainable Communities Strategies. The California Air Resources Board (CARB) established regional targets for GHG transportation emission reductions for 2020 and 2035. As part of the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy SCAG developed strategies to meet these targets. One of the strategies to reduce GHG emissions includes better coordination of transportation and land use to reduce sprawl and cluster new development along transit corridors. CARB is taking additional technology–related GHG reduction initiatives for both light duty vehicles as well as the freight transportation sector through promotion of cleaner and more efficient sea vessels, trains, trucks and autos. The California Transportation Plan has introduced scenarios that demonstrate a path to achieving the aggressive reductions in GHG emissions specified in Executive Orders on GHG emission reduction. Further, CARB has released the draft paper "Sustainable Freight: Pathways to Zero and Near-Zero Emissions," which serves as a basis for discussion of ways to reduce emissions from the freight sector.

Demographic Environment

Figure II-3: PM 2.5 Days above National 24-Hour Standard in Southern California



Source: County of San Bernardino

Over the past several decades, San Bernardino has grown by more than 40% since 1990, reaching more than 2 million residents. San Bernardino County has the fifth largest population in California and twelfth largest of any county in the nation. The 2010 U.S. Census population for San Bernardino County was 2,035,210, approximately 20% greater than in 2000. The County population continued to climb an additional 1.6% to 2.07 million by 2012. While the land in the San Bernardino Valley covers less than 2.5 percent of the county, population is concentrated in the valley, housing 70% of the county's residents. Another 15% of the county population currently resides in Victor Valley with the remainder spread across mountain and desert communities. **Figure II-4** summarizes existing countywide land use types while **Figure II-5** presents 2012 countywide population density. In **Figure II-4**, most of the vacant land is government-owned and not developable.

Table II-1 presents the base year 2012 population and employment values for San Bernardino County. It should be noted that the City of Big Bear Lake and other mountain communities are unique in that the full-time population and associated employment is small (about 5,000 and 3,800 respectively), but the population and employment increase substantially in the peak season, particularly on weekends. For example, the City and SANBAG have estimated that employment increases by approximately 2,000 in the peak season and some 60,000 visitors (part time residents, hotel guests, and others) are added to the population. This puts demands on the transportation system that go well beyond the seemingly small permanent population and employment numbers.

Table II-1: San Bernardino County 2012 Population/Employment

Jurisdiction	Population	Employment
Adelanto	31,145	3,885
Apple Valley	70,162	15,417
Barstow	23,069	8,135
Big Bear Lake	5,094	3,840
Chino	79,447	42,580
Chino Hills	75,765	11,471
Colton	52,768	16,826
Fontana	200,228	47,011
Grand Terrace	12,200	2,153
Hesperia	91,122	14,909
Highland	53,739	5,532
Loma Linda	23,409	16,665
Montclair	37,198	16,523
Needles	4,898	2,235
Ontario	166,328	103,312
Rancho Cucamonga	170,104	69,901
Redlands	69,585	31,732
Rialto	100,836	21,076
San Bernardino (City)	211,943	88,576
Twentynine Palms	25,875	4,336
Upland	74,660	31,684
Victorville	119,595	29,794
Yucaipa	52,270	8,160
Yucca Valley	20,951	6,053
Unincorporated County	295,587	57,357
County	2,067,978	659,163

Source: SCAG, SANBAG 2014

Figure II-4: San Bernardino County Existing Land Uses

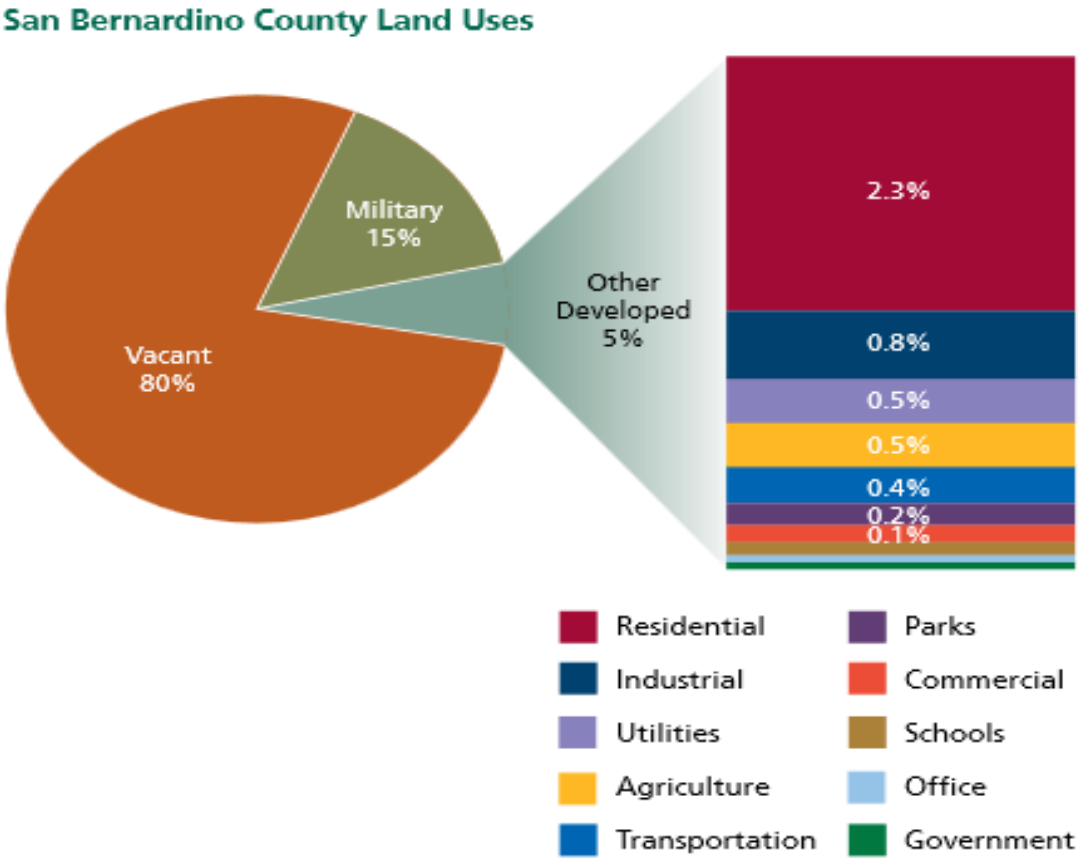
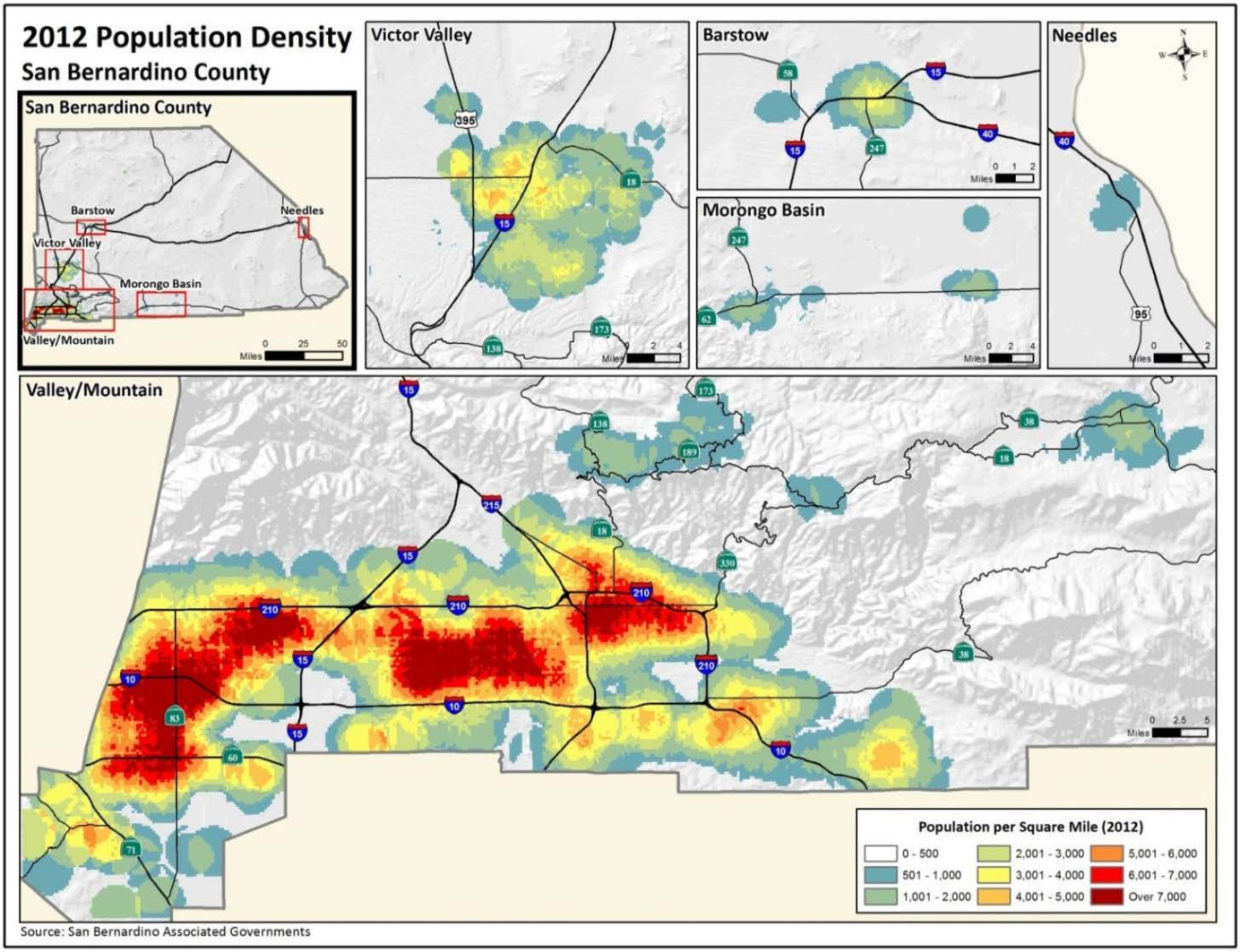


Figure II-5: Existing Population Density



San Bernardino County employment has historically risen with the increase in population; however, the jobs-housing balance remains less than 1 job per housing unit, which translates into a net export of workers from San Bernardino County to jobs in neighboring counties. **Figure II-6** demonstrates the lasting effect of the recent recession on San Bernardino County through a comparison of annual median income relative to state and national totals. In 2012, San Bernardino County dropped below the national average for the first time. **Figure II-7** presents historic countywide employment that also demonstrates the effects of the recession while **Figure II-8** presents 2012 countywide employment density. The recent economic recession has had an impact on San Bernardino County as employment dropped from pre-recession levels.

72,600:
Jobs lost countywide from 2007 to 2011

55,300:
Jobs regained countywide from 2011 to 2015

Source: CA Employment Development Department

Figure II-6: Median Household Income

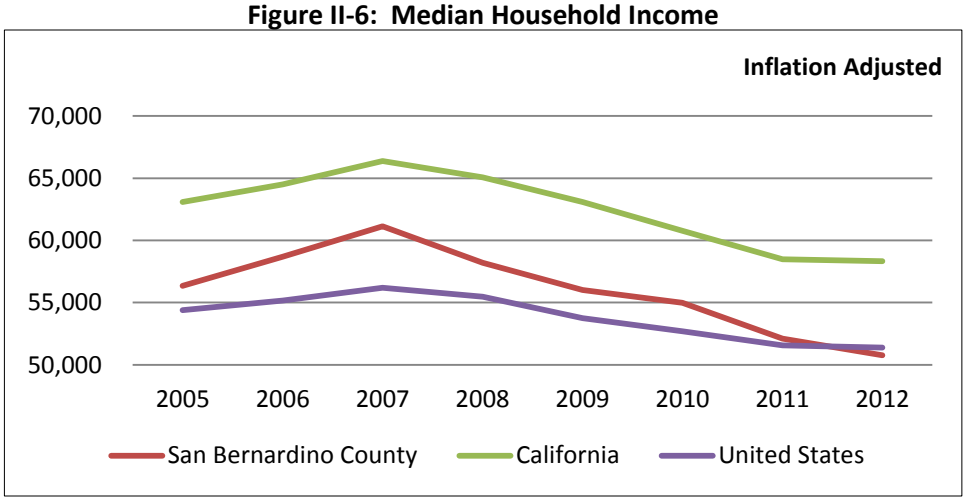


Figure II-7: Employment by Clusters with Greater than 20,000 Jobs

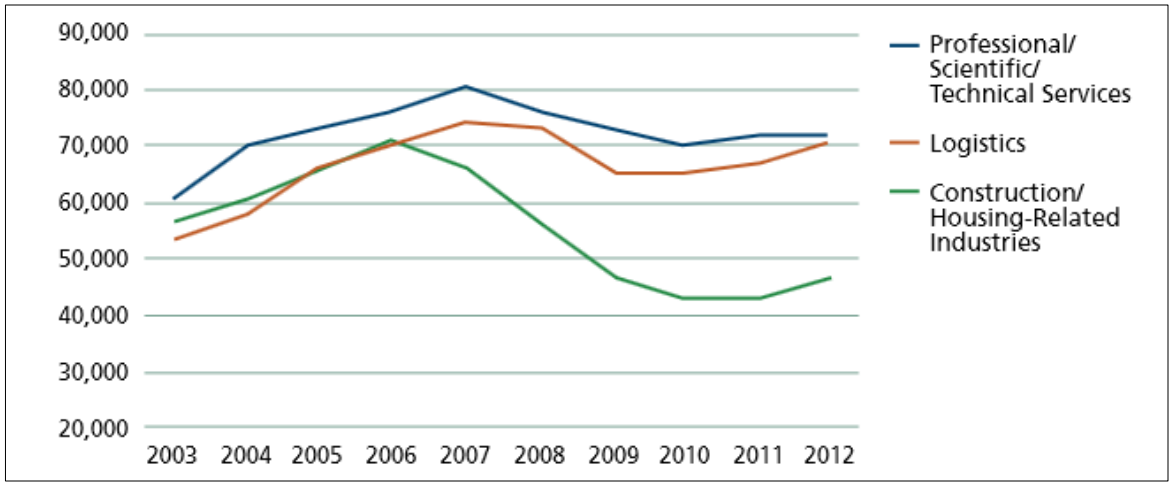
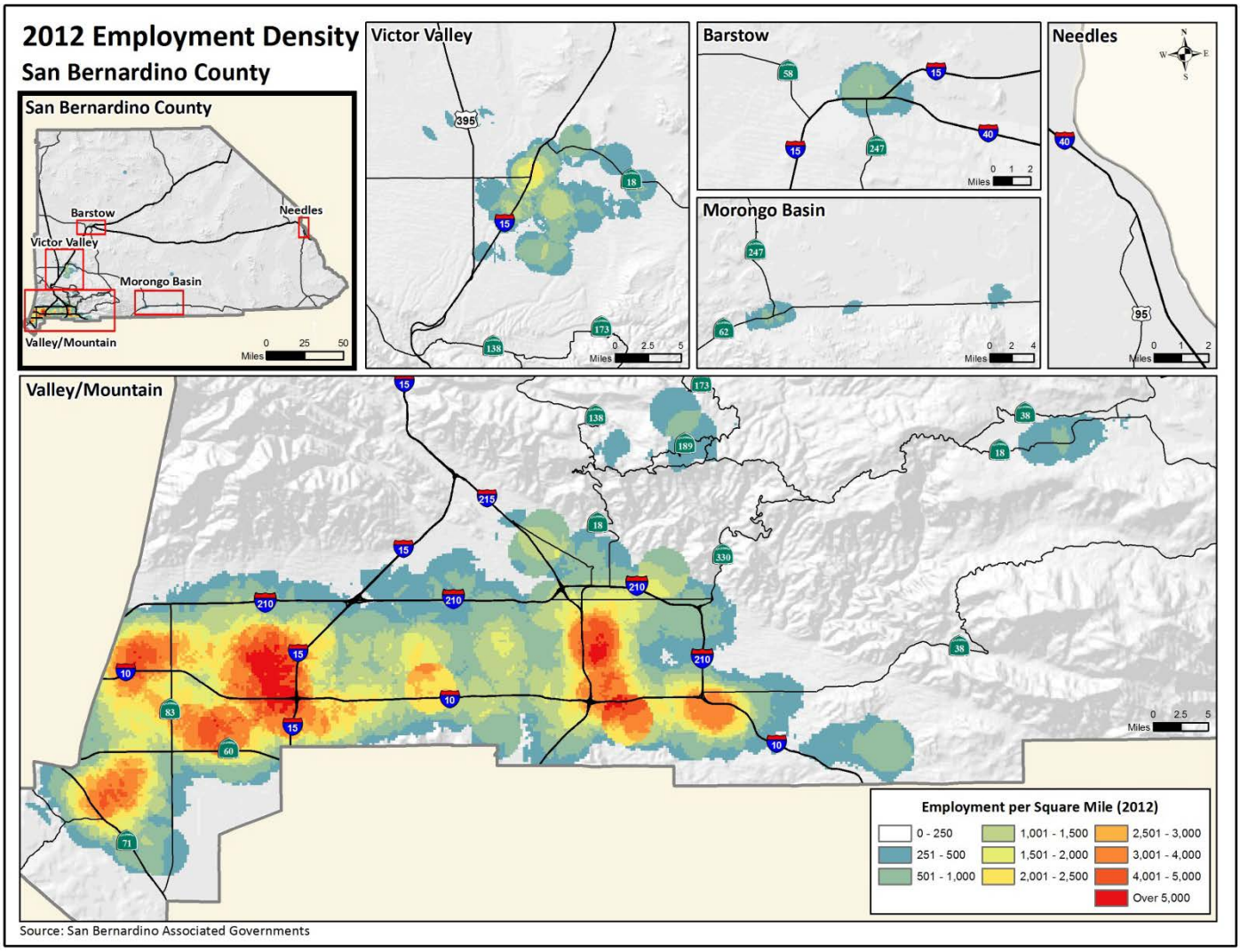


Figure II-8: Existing Employment Density

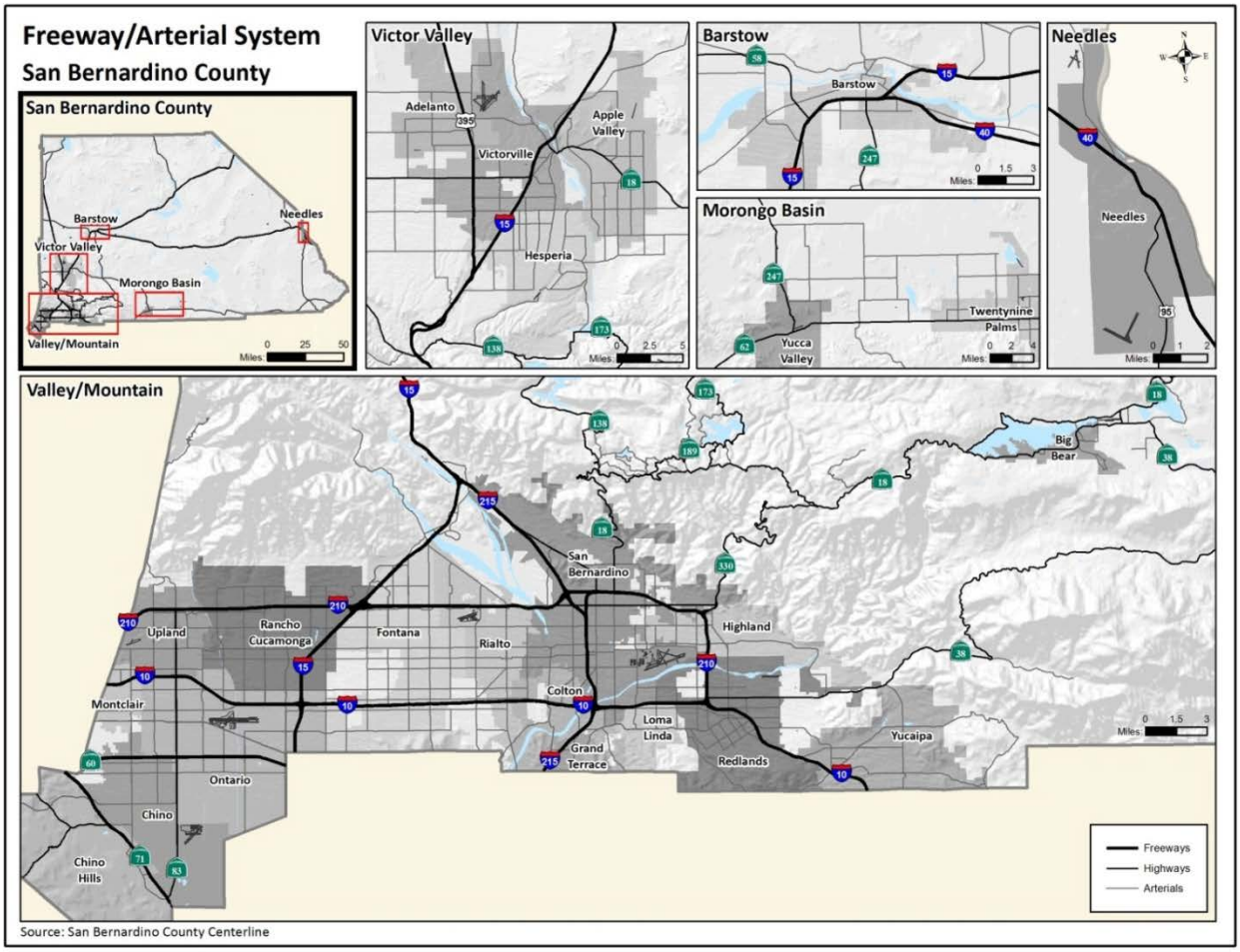


Source: San Bernardino Associated Governments

Highways

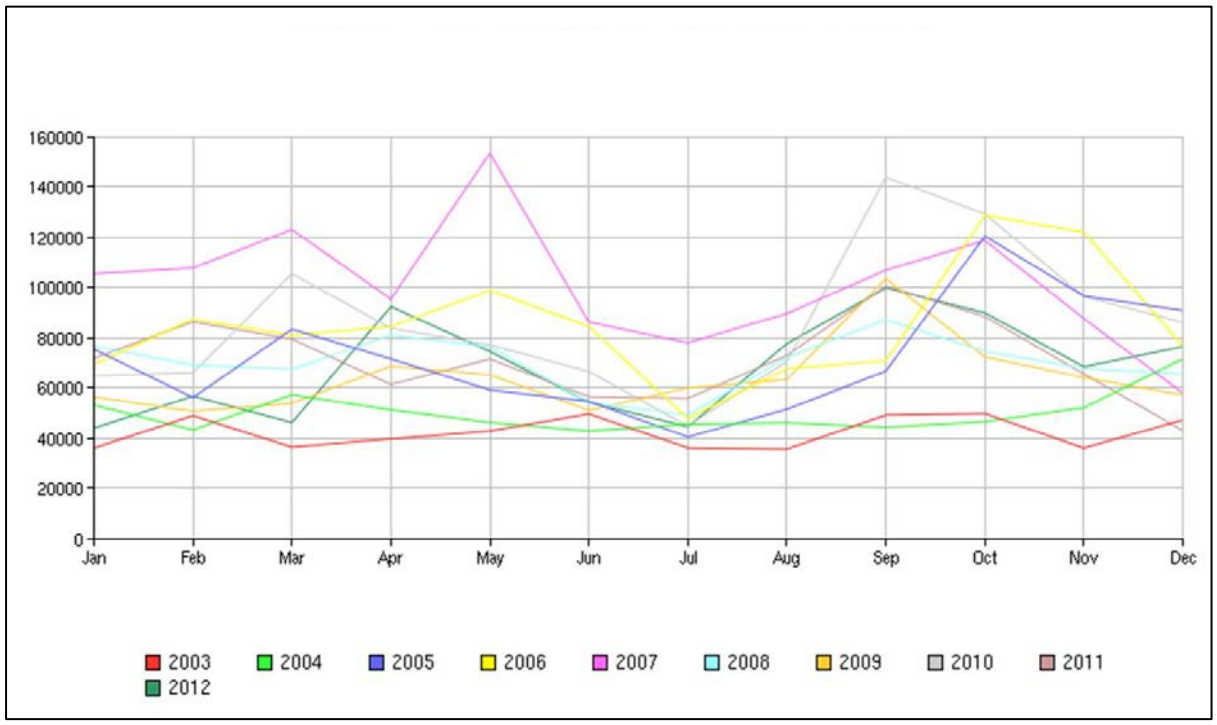
Several key Interstate and State Highways traverse the County and provide primary access to the remainder of the region. **Figure II-9** presents the existing freeway system throughout the County. The countywide road network includes over 22,000 centerline miles of highway/freeway general purpose lanes and 96 miles of existing freeway high occupancy vehicle lanes with 20 additional lane-miles under construction to be completed by 2015 (I-215). San Bernardino freeways have long been key regional and national assets as they include critical trade corridors between Southern California and the remainder of the United States.

Figure II-9: San Bernardino County Freeway/Arterial System



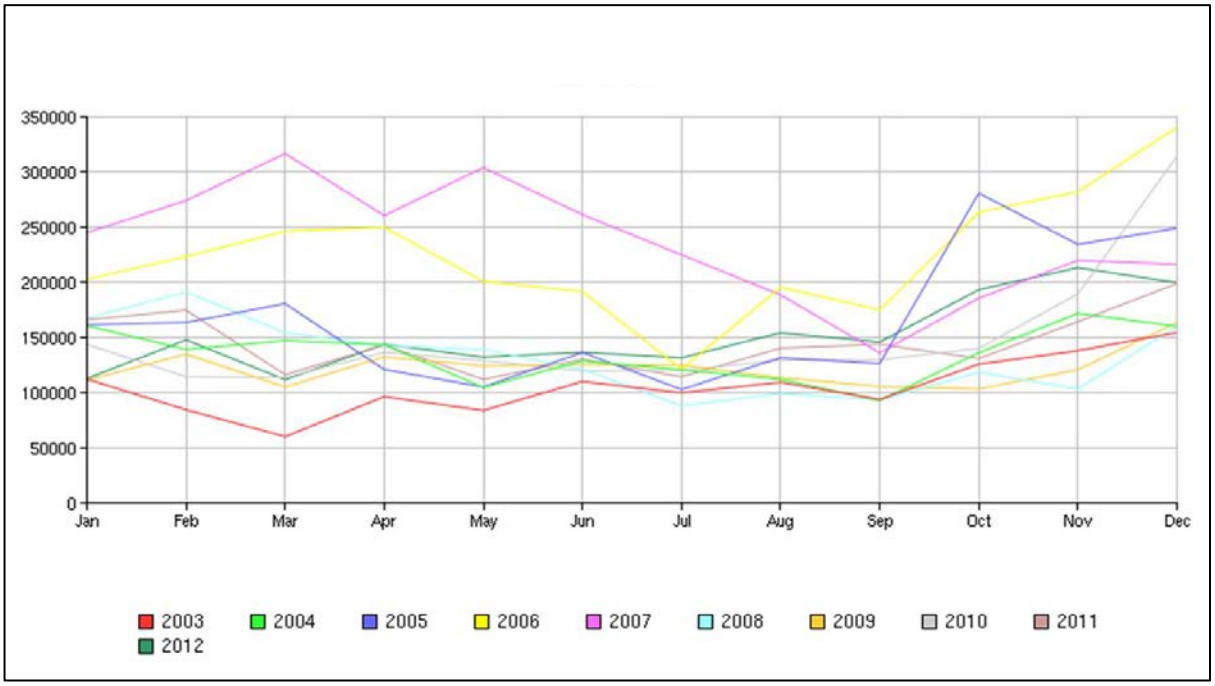
The most recent addition to the regional freeway system was the extension of SR-210 during the 2000's, with completion in 2007, from its previous terminus in Los Angeles County from just east of SR-57 to the former alignment of SR-30 at I-215. The reconstruction of I-215 from Orange Show Road to SR-210 was completed in 2014. San Bernardino Freeways experience congestion during peak periods although the recession has resulted in less peak period freeway congestion. The completion of SR-210 also demonstrably reduced congestion on I-10. **Figure II-11** demonstrates freeway performance levels primarily in the Valley portion of San Bernardino County from 2003 to 2012 for AM and PM vehicle hours of peak period delay according to the Caltrans Performance Measurement System (PeMS). Traffic congestion peaked in years 2005 through 2007. The completion of the 210 freeway in 2007 also seems to be one of the factors in the reduced vehicle hours of delay in subsequent years.

Figure II-10: Historical AM Peak Period PeMS Delay



Source: Caltrans Freeway Performance Monitoring System (PeMS)

Figure II-11: Historical PM Peak Period PeMS Delay



Source: Caltrans Freeway Performance Monitoring System (PeMS)

Arterial System

As the county has been settled and developed, the arterial system has taken form. Arterials complement the freeway system and facilitate local and regional travel. A countywide Nexus Study Network has been defined to guide future widening and expansion of the arterial system. The Nexus Study Network includes arterials that provide access to the freeway, serve inter-jurisdictional traffic, etc. Congestion is experienced throughout the arterial system due to heavy traffic demands, capacity constraints and signal or stop-controlled intersections. The performance of the arterial system is also impacted by the condition of the pavement. Local jurisdictions monitor pavement conditions and attempt to maintain the system to ensure efficient movement of vehicles.

Modeling Analysis of Highway System

The San Bernardino Transportation Analysis Model (SBTAM) was applied to generate base year forecast data for the highway system. The base year of SBTAM is 2012 while the horizon year is 2040, consistent with the SCAG regional model that will be applied for the 2016 RTP/SCS. The transportation model has been used to forecast future conditions so that future scenarios can be evaluated and compared to current and future conditions. Base year 2012 countywide person trip summaries are included in **Table II-2** while vehicle miles traveled, vehicle hours traveled and vehicle hours of delay are summarized in **Table II-3. Table II-2** demonstrates the linkages San Bernardino has to our neighboring counties with heavy daily trip interactions with Los Angeles and Riverside Counties. **Figure II-12** presents the AM peak period system performance while **Figure II-13** presents the PM peak period system performance.

Table II-2: SBTAM County to County Person Trip Summaries

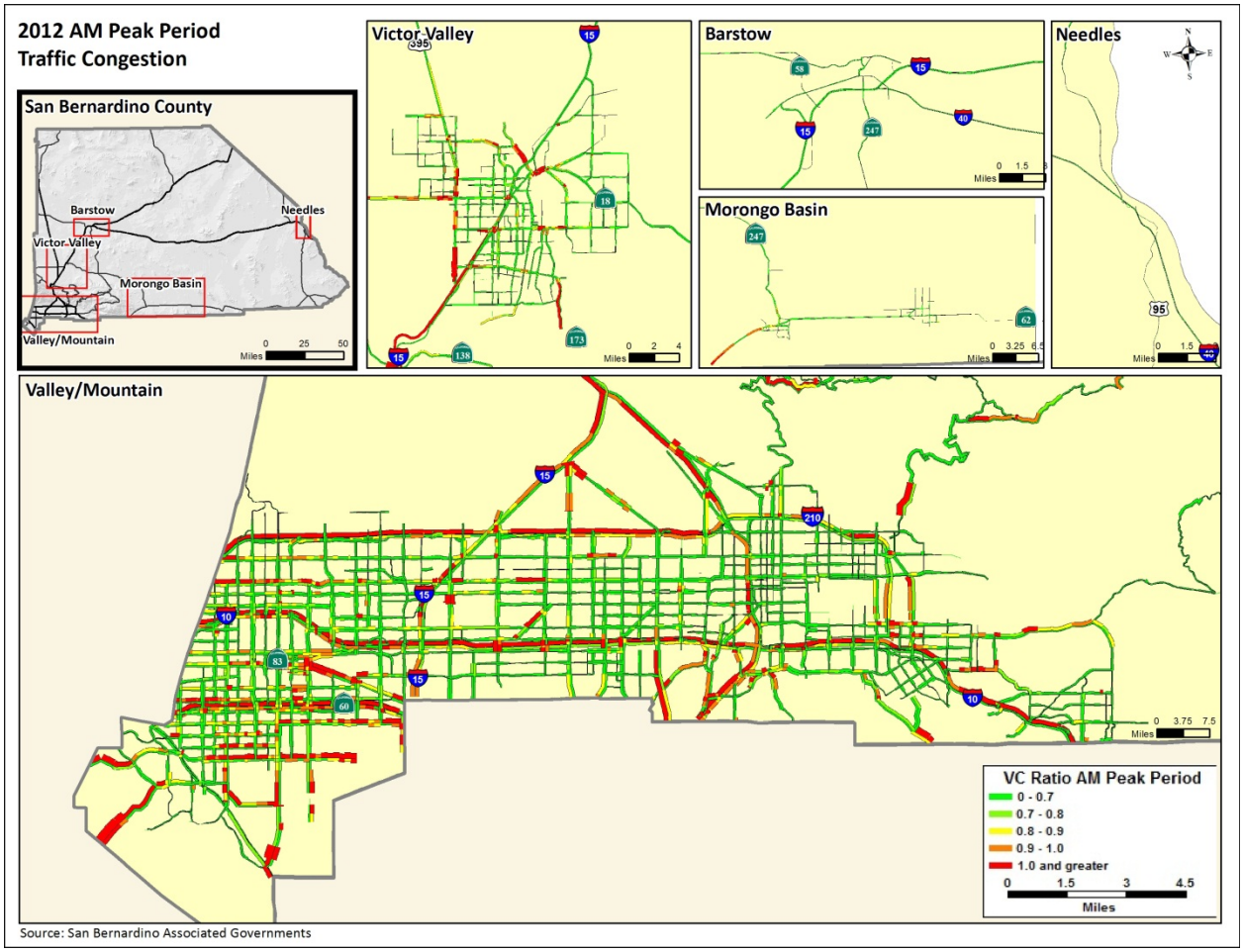
COUNTY	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	TOTAL
Imperial	456,319	1,478	591	6,428	1,759	146	466,720
Los Angeles	4,809	31,248,637	1,068,155	114,284	459,320	328,511	33,223,715
Orange	1,761	1,058,990	9,770,095	107,584	104,355	17,240	11,060,024
Riverside	15,966	231,067	245,424	5,612,207	475,334	9,592	6,589,589
San Bernardino	4,690	566,391	181,417	394,392	5,267,053	12,220	6,426,162
Ventura	803	374,406	19,790	5,088	12,729	2,353,590	2,766,407
TOTAL	484,347	33,480,968	11,285,471	6,239,982	6,320,550	2,721,299	60,532,616

Table II-3: SBTAM San Bernardino County Performance Statistics

Facility Type	Vehicle Miles Traveled	Vehicle Hours Traveled	Vehicle Hours of Delay	Average Speed
Freeway	36,660,568	639,479	68,113	57.3
Principal Arterial	7,888,089	221,647	41,084	35.6
Minor Arterial	8,108,461	226,534	23,336	35.8
Collector	3,805,710	115,764	8,450	32.9
Total	56,462,829	1,203,423	140,982	46.9

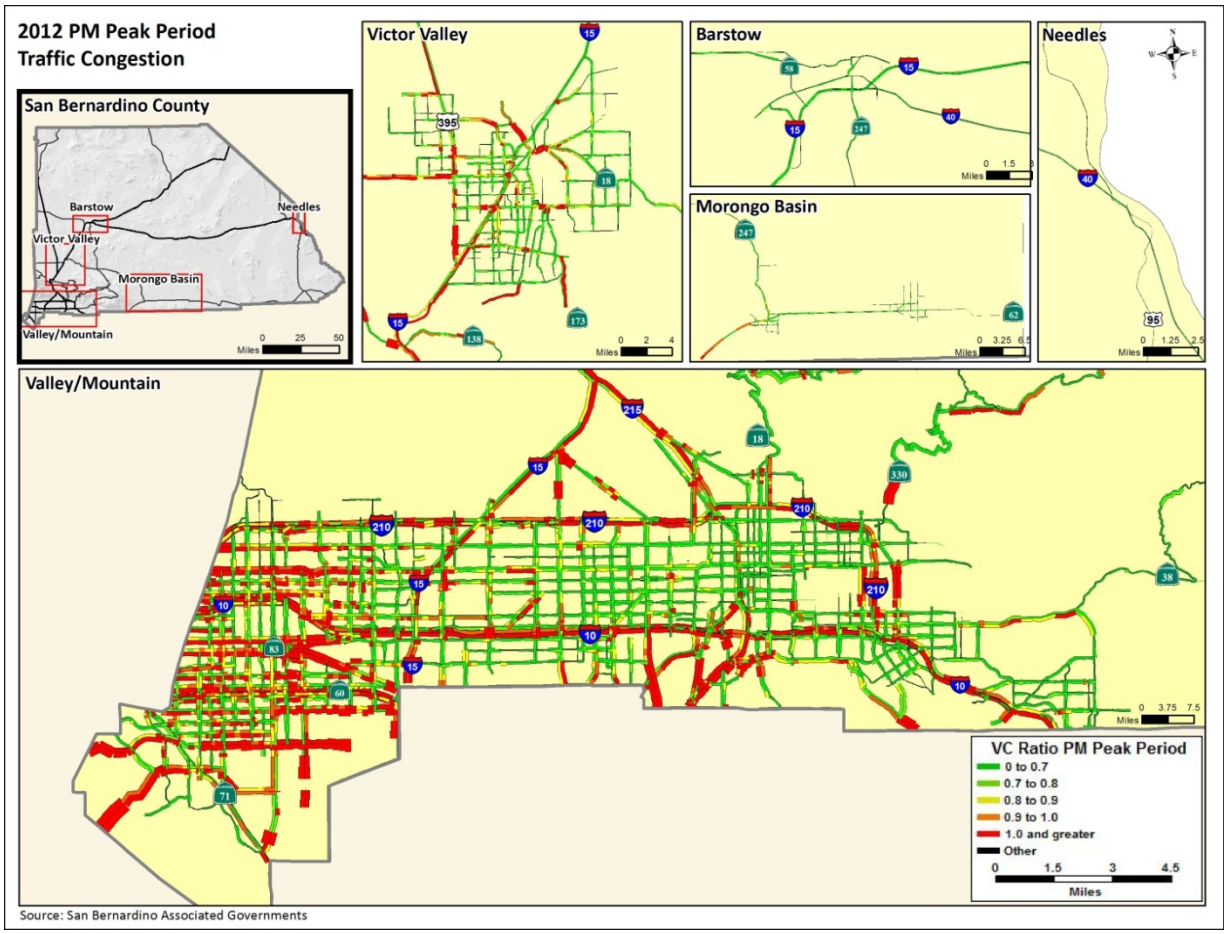
Source: SBTAM

Figure II-12: Base Year 2012 AM Peak Period Transportation System Performance



Source: SBTAM

Figure II-13: Base Year 2012 PM Peak Period Transportation System Performance



Source: SBTAM

Transit

Transit provides an opportunity for reducing vehicle miles traveled (VMT) through shifts from low occupancy modes of travel with significant economic, environmental and quality of life benefits to the community. Investment in transit is increasingly essential as demands on transit services increase due to population and economic growth. Improvement and coordination of transit service to key industry clusters strengthens regional economic competitiveness as well as personal mobility.

The San Bernardino Valley covers less than 2.5% of the land area in the county but houses over 70% of the residents and accounts for over 90% of current county transit ridership.

SANBAG is currently developing a Short Range Transit Plan (SRTP) to establish regional transit mobility goals and objectives and to address regional transit needs. The SRTP will identify transit service plans and help prioritize major capital improvement projects for the region's transit needs to help guide transit service improvements over the next five years. The proposed SANBAG regional goals are:

- Network Connectivity — Coordinate and integrate the transit services of the various transit operators throughout the County

- Inter-Regional Transit Travel — Facilitate inter-regional transit travel between regions of the County as well as between San Bernardino County and other counties
- Access for All — Seek cost-effective accessibility programs to improve mobility for seniors and persons with disabilities
- Commuter Rail Service — Support continued development and enhancement of commuter rail service in San Bernardino County
- Key Projects — Implement projects that will support the SRTP's goals, including:
  - Carpool and vanpool services, including expanded regional vanpool services
  - Downtown San Bernardino Passenger Rail Project
  - San Bernardino Transit Center
  - Redlands Passenger Rail Project

Six transit agencies provide bus service coverage to over 90% of the County's population (refer to **Figure II-14).** Combined, these local agencies - Barstow Area Transit (BAT), Morongo Basin Transit Authority (MBTA), Mountain Area Regional Transit Authority (MARTA), Needles Area Transit (NAT), Omnitrans, and Victor Valley Transit Authority (VVTA) - carry over 18.5 million people annually. There are ongoing efforts to identify efficiencies to improve the overall level of service through a reduction in administrative costs. The vast majority of ridership (16 million) is centered within the densely populated San Bernardino Valley. **Table II-4** provides a summary of annual ridership and service hours for these agencies. In addition to fixed route buses, other services offered include demand-response and bus rapid transit. Local agencies develop their own transit plans according to data collected about existing and potential customer needs. In response to travel demand, each agency determines the time frame and intervals that their vehicles will run.

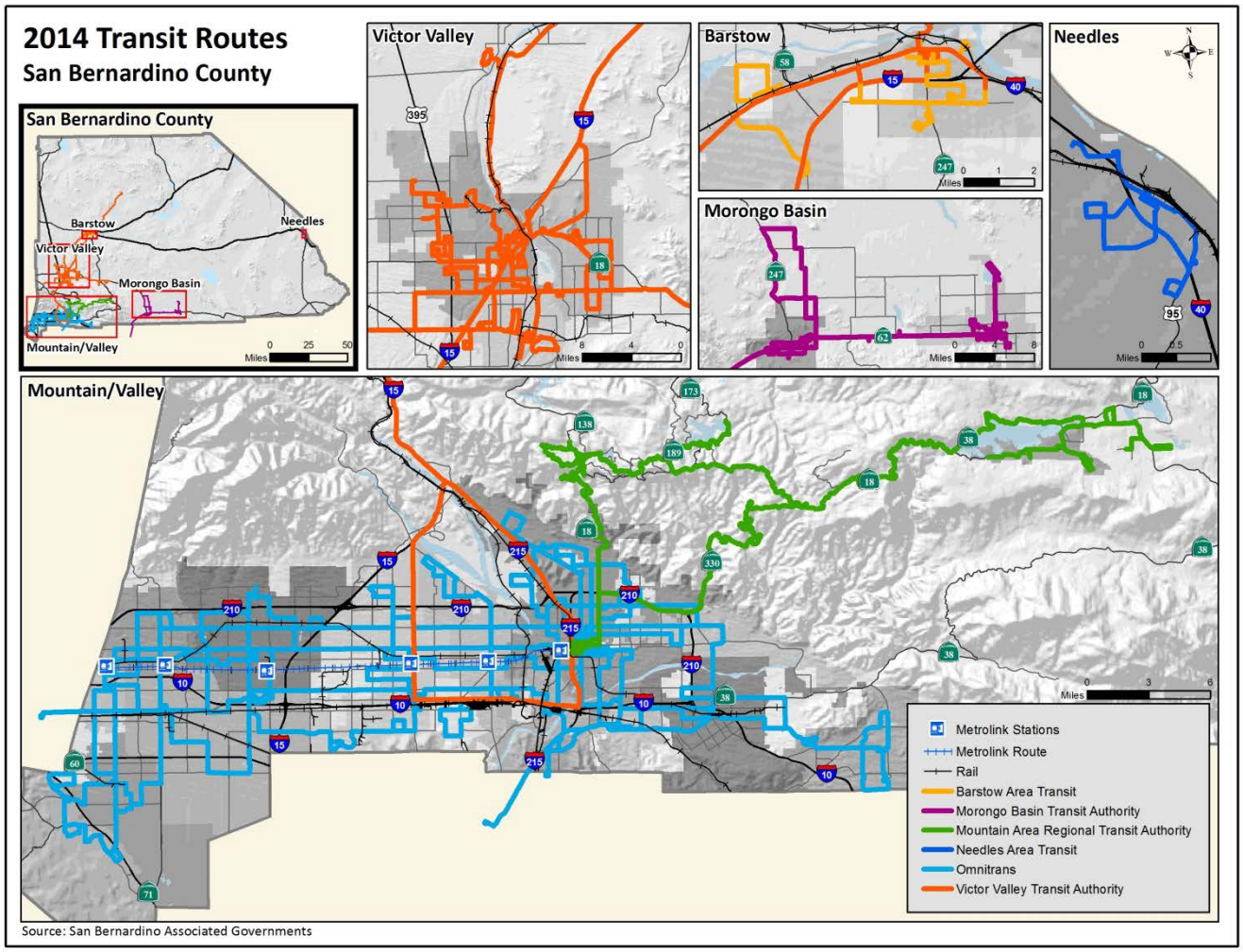
Table II-4: Existing San Bernardino Transit Service Provider Summary

Service Provider	Annual Ridership (FY 2013)	Total Service Hours
Barstow Area Transit	210,062	37,998
Morongo Basin Transit Authority	380,748	69,241
Mountain Area Regional Transit Authority	153,408	52,676
Needles Area Transit	38,705	4,438
Omnitrans	16,146,278	1,431,926
Victor Valley Transit Authority	2,151,301	373,852
Total	**19,080,502**	**1,970,131**

Omnitrans, MBTA, and VVTA are working to increase access to connect veterans, active military personnel, and their families with services and destinations they use most often. Additionally, each of the six transit agencies has supplemental programs that aid seniors and persons with disabilities, helping to improve mobility around the County. Goals and objectives of the various transit operators have consistent themes and include:

- Safety
- Reliability
- Minimize service duplication
- Solicit Input on services from public
- Minimize operating cost
- Increase ridership
- Expand geographic reach
- Expand span of service

Figure II-14: San Bernardino County Transit System



Barstow Area Transit

Barstow Area Transit (BAT) provides fixed route bus service for the City of Barstow and surrounding areas of San Bernardino County, including the communities of Lenwood, Hinkley, Yermo, Grandview, Harvard, Daggett and Newberry Springs. Two San Bernardino County supported specialized services for seniors and persons with disabilities serve the communities of Big River and Trona. BAT serves more than 200,000 annual passengers. BAT merged with Victor Valley Transit Authority in 2015 to realize cost savings and achieve more efficient transit administration.

Morongo Basin Transit Authority

Morongo Basin Transit Authority (MBTA) is a Joint Powers Authority (JPA) that operates fixed route local bus service throughout the Morongo Basin including within the City of Twentynine Palms and the Town of Yucca Valley. MBTA provides a feeder service called Ready Ride which offers door-to-door demand response vehicle service for the disabled and seniors.

Mountain Area Regional Transit Authority

Mountain Area Regional Transit Authority (MARTA) is a JPA that serves mountain communities in the Big Bear Valley, Running Springs, Crestline, Lake Arrowhead and Blue Jay through fixed route local bus service. The agency also provides two "Off the Mountain" routes from Big Bear Valley and Lake Arrowhead to downtown San Bernardino. MARTA's Off the Mountain Services connects passengers with Metrolink and Greyhound stations in San Bernardino. Dial-a-Ride paratransit services are also available for seniors and disabled passengers living more than a quarter mile beyond MARTA's fixed routes.

Needles Area Transit

Needles Area Transit (NAT) system transports approximately 38,000 annual riders with fixed route services throughout the City of Needles and dial-a-ride provisions for seniors and persons with disabilities.

Omnitrans

Established in 1976 through a joint powers agreement, Omnitrans serves approximately 16 million annual passengers throughout its 480 square mile service area, covering 15 cities and portions of the unincorporated areas of San Bernardino County. Omnitrans is administered by a Board of Directors comprised of a Mayor or City Council Member from each member jurisdiction and all five County of San Bernardino Supervisors.

As part of its fixed route system, Omnitrans serves an increasingly crucial feeder service role for Metrolink. Metrolink stations in Montclair, Fontana and downtown San Bernardino (opening in 2015/2016) also serve as Omnitrans hubs.

In addition to vital fixed routes operating on city streets and local freeways, Omnitrans provides specialized services including sbX Bus Rapid Transit (BRT), OmniGo, and paratransit Access. Omnitrans sbX BRT service provides express service along a 15.7 mile corridor between northern San Bernardino (California State University, San Bernardino) and Loma Linda (Veterans Administration Hospital), connecting key university, government, business, entertainment, medical center, and park-and-ride facilities. OmniGo is comprised of three circulator service routes serving the communities of Chino Hills, Grand Terrace, and Yucaipa focused on connecting major destinations, including schools, senior centers, and shopping centers. Finally, Access operates under the guidelines of the Americans with Disabilities Act (ADA) to provide service for those who are unable to independently use the fixed routes for all or some of their trips up to ¾-mile on either side of an existing bus route.

Victor Valley Transit Authority

Victor Valley Transit Authority (VVTA) is a JPA established in 1991 that serves a 424 square mile service area in the Victor Valley with a population over 300,000. VVTA is comprised of five jurisdictions: the cities of Adelanto, Hesperia, and Victorville, the Town of Apple Valley, and several unincorporated areas of San Bernardino County including Phelan, Pinon Hills, Wrightwood, Lucerne Valley, Helendale, and Oro Grande. VVTA provides feeder services, B-V Link, which connects Barstow, Victorville, and the San Bernardino Valley. The NTC routes connecting residents from Fort Irwin to Victorville and Barstow. VVTA also actively promotes ridesharing through a vanpool subsidy program for groups of seven to fifteen people enabling them to share their commute to work.

Valley Transportation Services

Valley Transportation Services (VTrans) is a not-for-profit Consolidated Transportation Services Agency dedicated to improving mobility for seniors, disabled, and persons of low income. VTrans currently operates programs in the San Bernardino Valley area, including one on one or group Travel Training. VTrans is also a project sponsor for a variety of other human service transportation programs, such as volunteer driver mileage reimbursement programs and agency directly provided trips.

Rail

The Southern California Regional Rail Authority (SCRRA) is the joint powers authority that operates the Metrolink commuter rail system. This system serves Los Angeles, Orange, Riverside, Ventura and San Bernardino Counties (refer to **Figure II-15** which includes the downtown Los Angeles core urban rail system for information). Metrolink served an average of 45,050 passengers per day throughout the total system in 2012 with the San Bernardino Line serving the most passengers, approximately 12,000 per day. The daily passengers served by the stations in San Bernardino are presented in **Table II-4**. Based on the most recent Metrolink passenger survey, three out of four Metrolink passengers use the system at least four days a week and 73% of riders rate their overall satisfaction with Metrolink as *Good* or *Excellent*.

Construction is currently ongoing for the extension of Metrolink into Downtown San Bernardino concurrent with the construction of a new transit hub located in Downtown San Bernardino. These facilities will enhance the reach of the rail system enabling Metrolink to connect with both the E Street sbX Bus Rapid Transit line and the future Redlands Passenger Rail line at the San Bernardino Transit Center.

Environmental approvals have been obtained for the Redlands Passenger Rail Project, and SANBAG is proceeding with design. Initiation of passenger rail service to Redlands is anticipated in the 2018 timeframe. Stations will include downtown San Bernardino, Hospitality/Tippecanoe, New York Avenue, downtown Redlands and the University of Redlands. The expansions of rail service will not only address passenger needs but also help the region satisfy AB 32 (Global Warming Solutions Act) and SB 375 (Sustainable Communities Strategies) goals, facilitating transit oriented development (TOD) in the station areas.

Passenger traffic in the SCAG region using Metrolink/Amtrak commuter services is projected to grow by 60% to 100% by 2035. Current demand warrants consideration of additional express train service from the San Bernardino and Rancho Cucamonga stations, but implementation will require double tracking for an additional four miles of the line. Of the 38 daily Metrolink trains on the San Bernardino Line, two (one in each direction) are express trains.

Figure II-15: Regional Rail Network

Table II-4: San Bernardino County Metrolink Station Average Daily Boardings

Station	2012	2011
San Bernardino	945	850
Rialto	370	340
Fontana	480	490
Rancho Cucamonga	1,165	1,120
Upland	620	630
Montclair	380	390

Source: Metrolink

Goods Movement/Freight

Phineas Banning is known as the "Father of Los Angeles Harbor"

San Bernardino County has long been a gateway to the Southland. The Cajon Pass from the north and the San Gorgonio Pass (also known as the Banning Pass) from the east were logical locations for the establishment of transnational routes into and out of the Southern California region in the 1800s.

In 1829, traders opened a route between Los Angeles and Santa Fe via the Cajon Pass, providing a vital economic link between the two Mexican cities of that day. The trade route was later used by the American adventurer John C. Frémont and his guide, Kit Carson, who named the corridor the Old Spanish Trail and advertised it as a link between the coast and the interior of the new American West. This later became known as part of the National Old Trails Road, which was designated Route 66 in 1926. After coming down Cajon Pass, Route 66 generally followed the alignment of today's Interstate 215 to downtown San Bernardino and then turned due west toward Los Angeles and Santa Monica. Route 66 and U.S. 395 at one time merged in Hesperia and diverged in San Bernardino as U.S. 395 headed south toward San Diego. Interstate 15 (the Mojave Freeway) was built over the Cajon Summit in 1969 and together with Interstate 40 is now one of the primary truck corridors to and from the Midwest.

The California Southern Railroad, a subsidiary of the Atchison, Topeka and Santa Fe Railway, built the first rail line to use the Cajon Pass as a route through the mountains. The line was built in the early 1880s as part of a connection between the present day cities of Barstow and San Diego. The Southern Pacific Railroad Company built its own track, known as the Palmdale-Colton Cutoff, through the pass in 1966/1967.

In terms of the eastern gateway, the first stagecoach line came through the Banning Pass in 1862. The pass is named for Phineas Banning, stagecoach line owner, founder of Wilmington, and known as the "Father of Los Angeles Harbor." The east-west U.S. Route 99 was built in 1923, generally following the route of today's Interstate 10. The Southern Pacific railroad followed in the late 1870s, eventually purchased by the Union Pacific railroad of today.

This legacy as a gateway has lived on today, shaping not only the San Bernardino Valley, but the High Desert communities as well. The growth of freight movement in San Bernardino County has generally tracked the growth of the Ports of Los Angeles and Long Beach, together the largest port complex in the United States. The significance of the gateway through San Bernardino County has increased as the ports have grown.

The combination of geographic location, relationship to the ports, and world-class transportation infrastructure continue to provide San Bernardino County with economic opportunities into the future. But these opportunities must be managed well, if the County is to continue to benefit from its ongoing strategic advantages as the gateway to Southern California.

Goods movement is essential to support the economy and quality of life in the Southern California region. The Southern California region is the largest international trade gateway in the United States, supported by marine ports, air cargo facilities, railroads, and freeways. In 2012, over $48 billion of trade passed through the Southern California ports of entry.

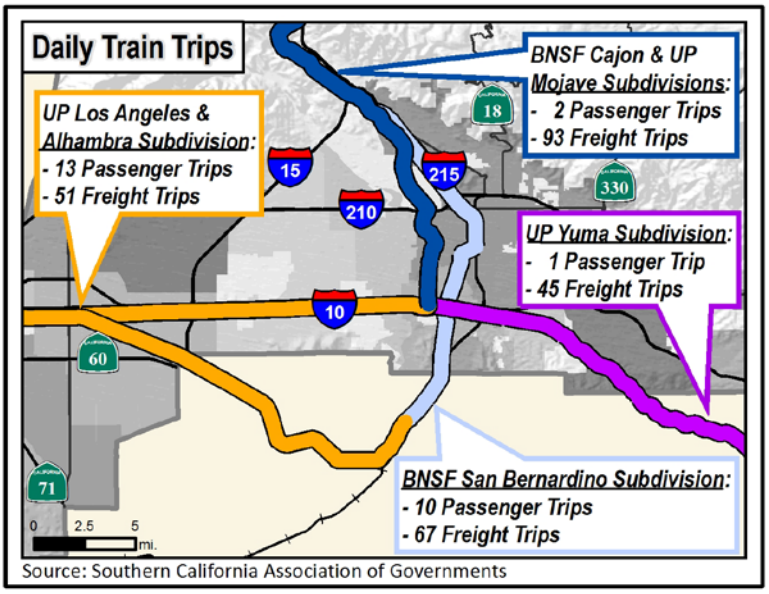
The distribution and logistics sector employs 123,000 workers in San Bernardino County

Much of that trade filters through San Bernardino County to the remainder of the country on rail. Two Class I railroads now serve the region: Burlington Northern Santa Fe Railway (BNSF) and the Union Pacific Railroad (UP). These railroads handle the vast majority of rail cargo in the region. BNSF operates an intermodal rail yard in downtown San Bernardino adjacent to the historic Santa Fe Depot while UP operates a classification yard in Rialto and Colton parallel to the I-10 freeway (refer to **Figure II-16**).

Freight movement is a significant component of the goods movement economy of San Bernardino County. Goods that enter at the Port of Long Beach or Port of Los Angeles that are distributed by rail throughout the nation must travel through the BNSF and UP rail lines in San Bernardino. The distribution and logistics sector employs 123,000 workers in San Bernardino County and is currently the fastest growing sector, representing approximately 20% of the County's employment.

Retailers housed in San Bernardino County

Figure II-16: Weekday Railway Utilization



Source: Southern California Association of Governments

Approximately 40% of the nation's containerized freight flows through the ports, and 80% of that funnels through San Bernardino County by rail and truck. The County is home to an extensive network of warehouse and distribution facilities, some 200 million square feet of warehouse facilities, or approximately 25% of the regional total. Many of these are large high-cube facilities designed to meet demands for automation and adaptability to the dynamics of today's supply chains. Some of the most well-known players in wholesaling, retailing, and e-commerce are housed here, examples of which include: Amazon, Ashley Furniture, Best Buy, Coca-Cola, COSTCO, Dr. Pepper, Kohls, Mattel, Pep Boys, Pepsi, Stater Brothers, Target, and Walmart. Both UPS and FedEx run major operations out of Ontario International Airport. **Figure II-17** shows the extent of developed industrial/warehousing land use in the Valley and Victor Valley.

Heavy daily freight train traffic result in vehicle delays at arterial crossings in the San Bernardino Valley and Victor Valley. In addition, freight train traffic must coexist with passenger rail traffic, creating additional operational challenges for freight and passenger movement through the region (Refer to **Figure II-16**). **Figure II-18**: Railroad Crossing Locations presents the various rail/arterial interfaces throughout the county. While there are many grade separations, many at-grade crossings still exist which present safety issues and growing traffic congestion as the use of the rail lines and traffic demands increase.

The nexus of an extensive transportation network (air, highway, rail – refer to **Figure II-19**) along with available and relatively affordable land make San Bernardino an ideal location for manufacturing, warehousing and distribution facilities. As a result of the expansive warehousing operations located throughout San Bernardino County and the location with respect to the Ports of Los Angeles and Long Beach and the remainder of the United States, freeways throughout the county experience heavy truck traffic (Refer to **Figure II-20**).

Figure II-17: Developed Industrial/Warehousing Land Use

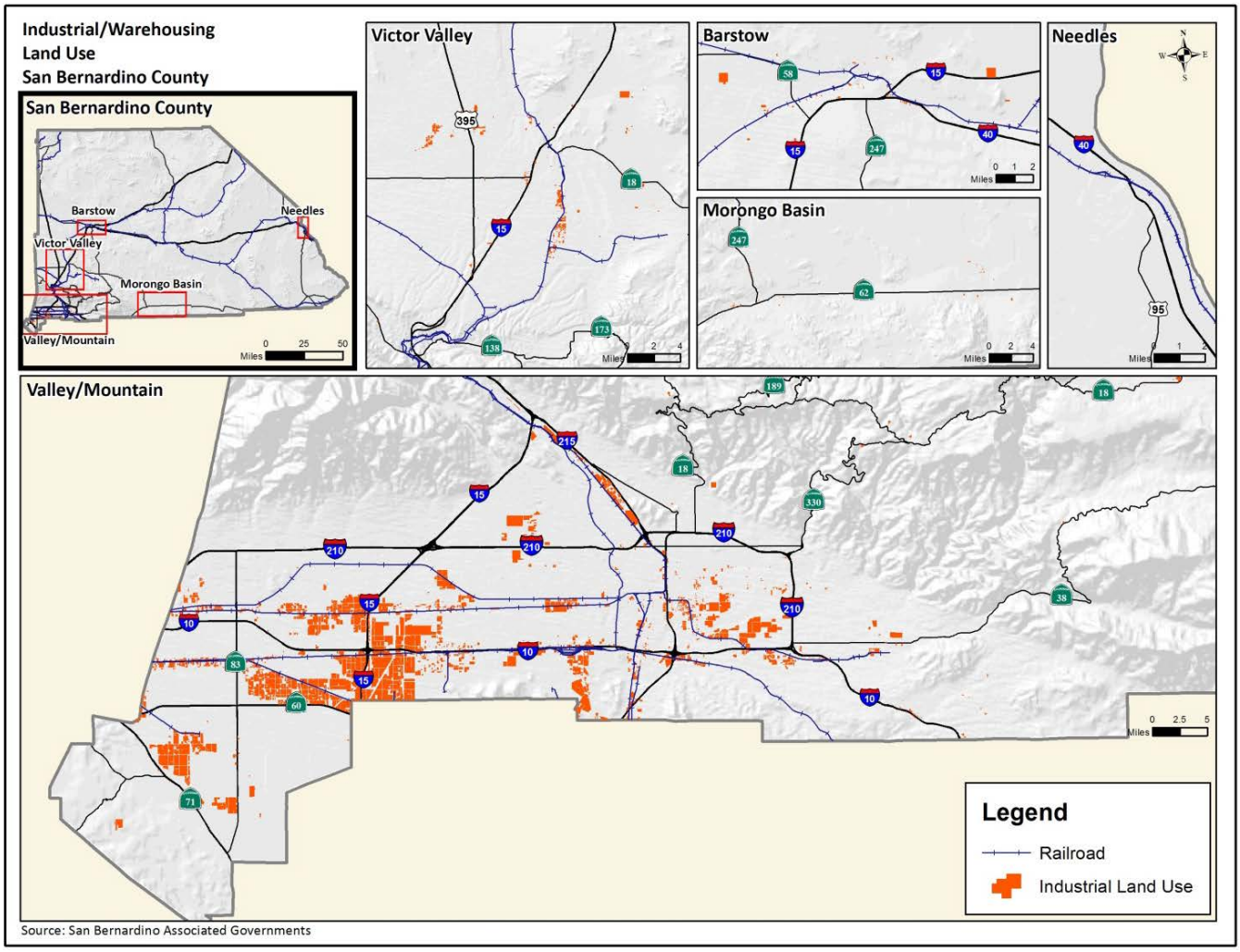


Figure II-18: Railroad Crossing Locations

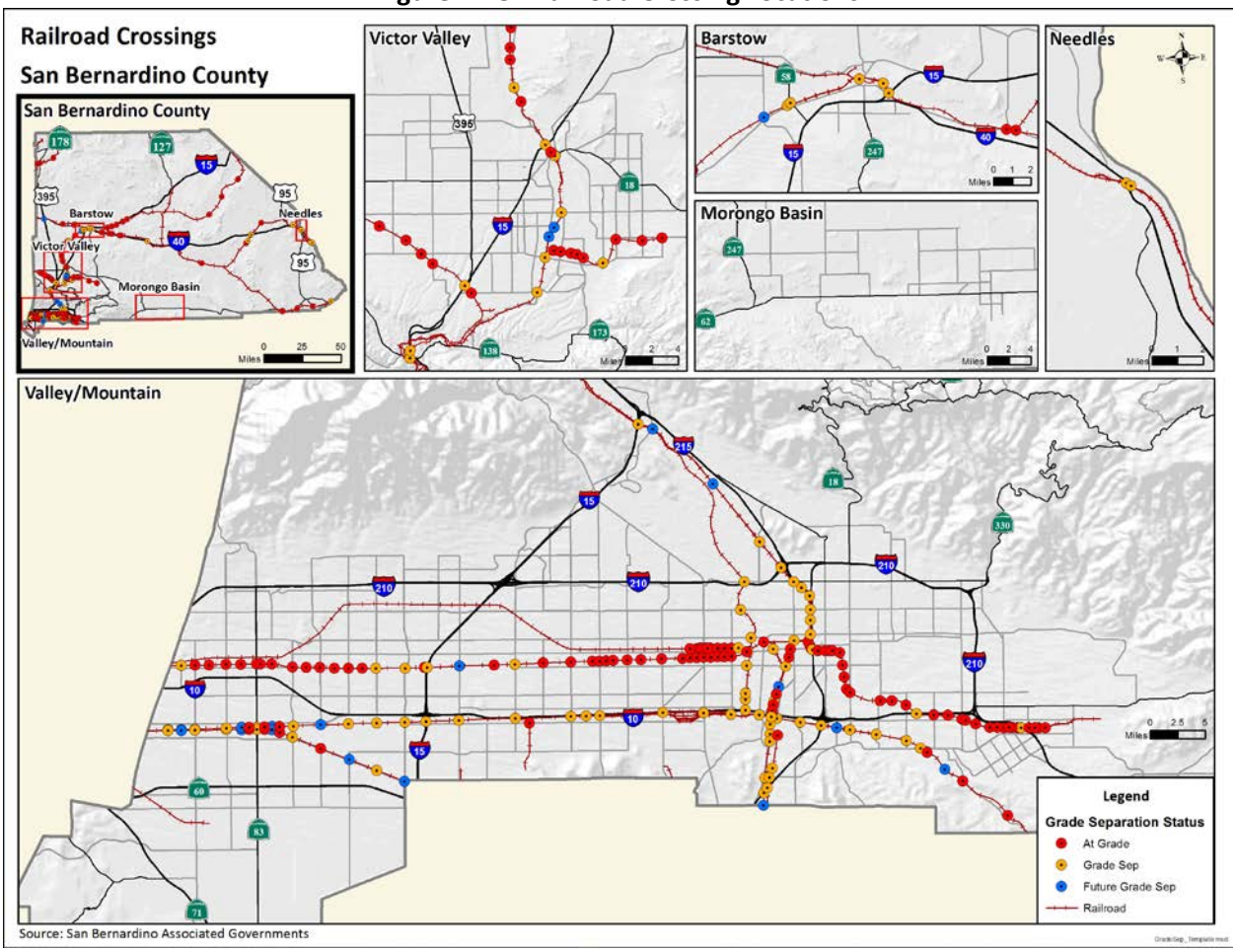


Figure II-19: Freeway, Rail Lines and Intermodal Facilities

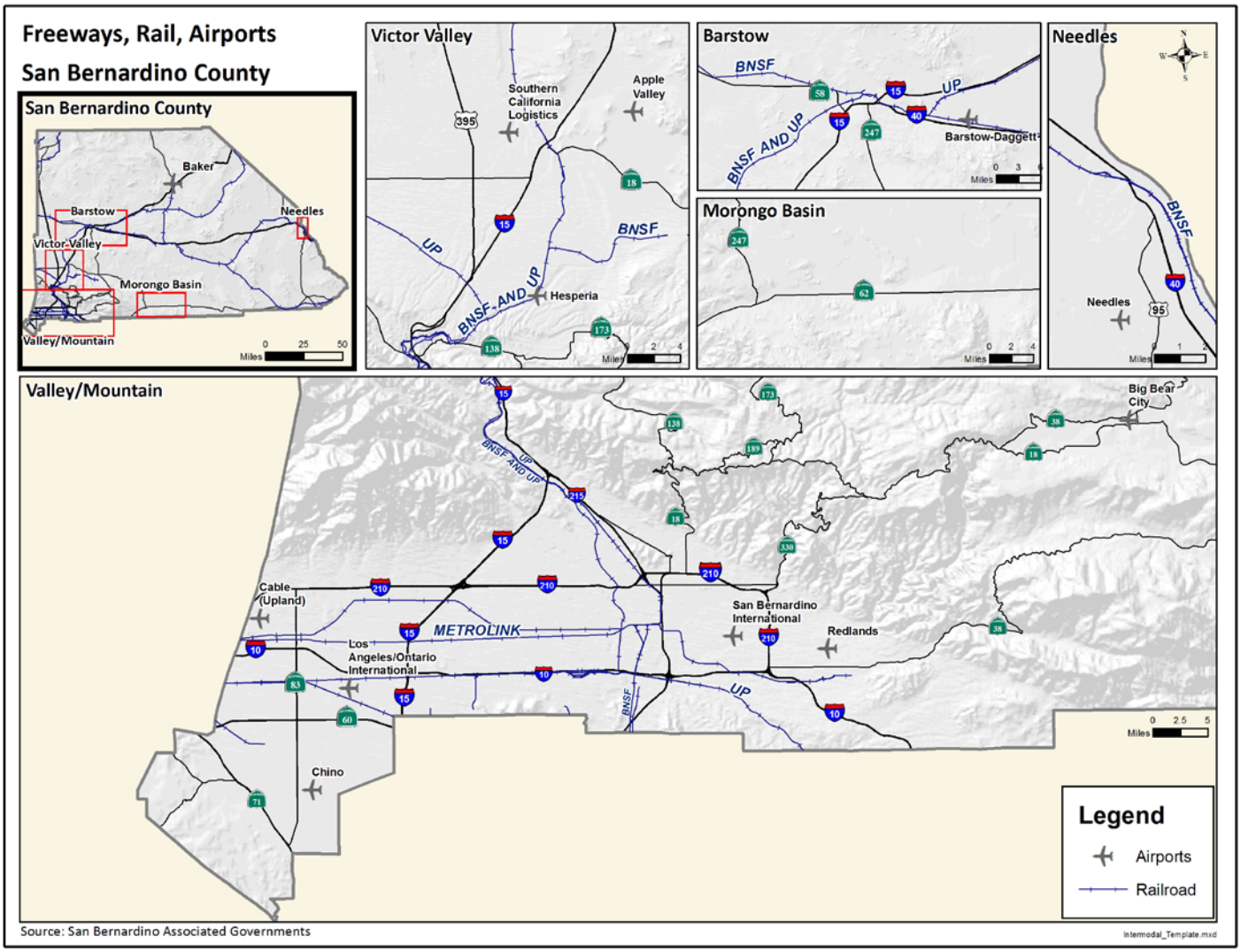
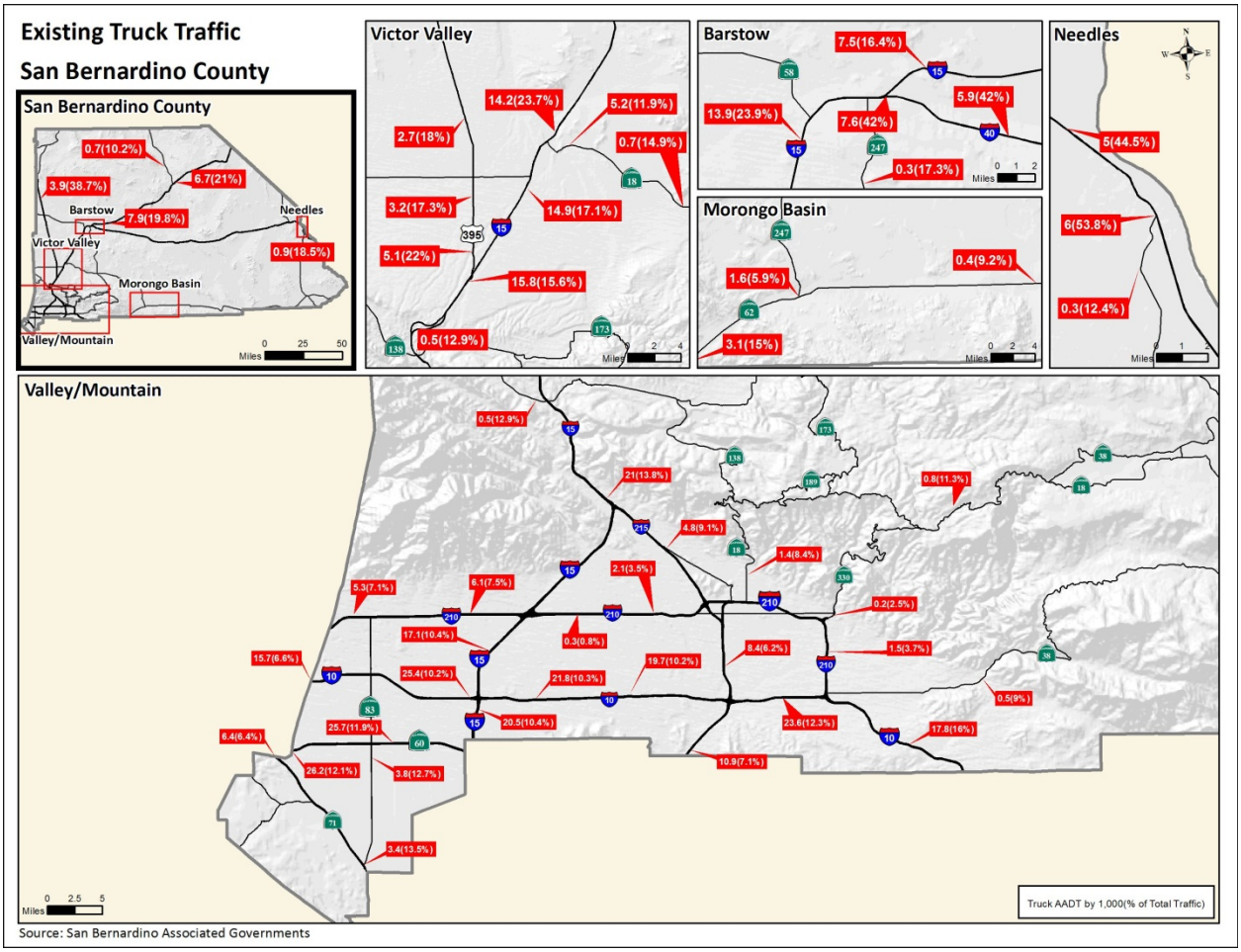


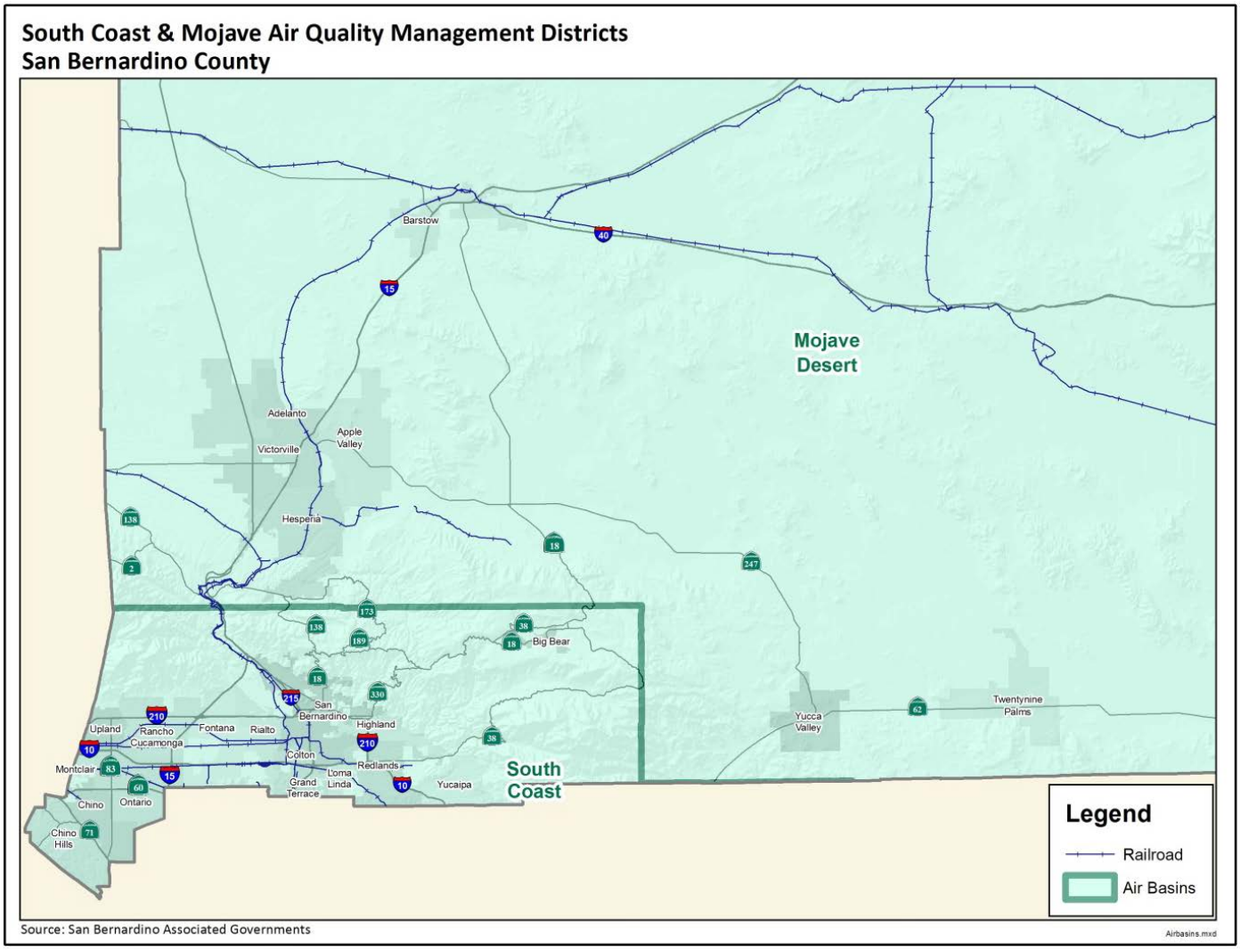
Figure II-20: Existing San Bernardino County Daily Truck Volumes



Freight and Air Quality

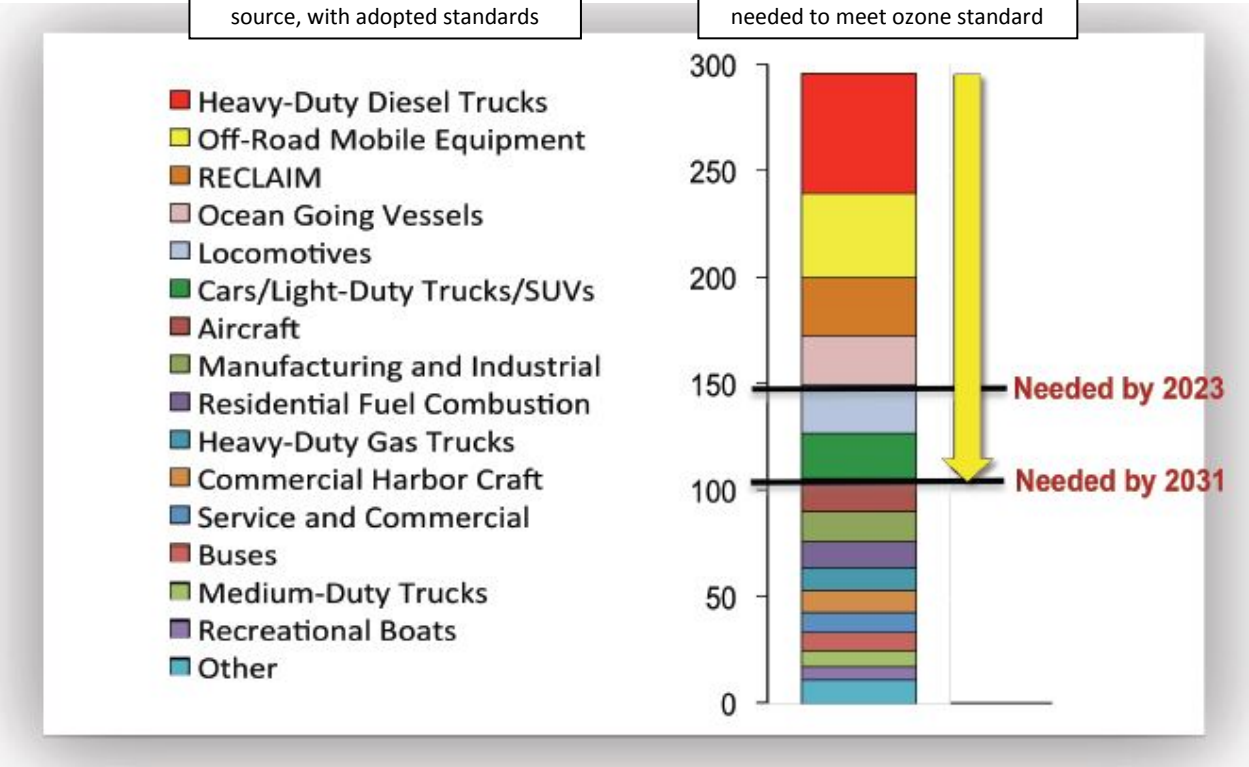
San Bernardino County is covered by both the South Coast and Mojave Air Quality Management Districts (AQMDs). **Figure II-21** presents the coverage of the two districts. The South Coast AQMD is a federally designated "extreme non-attainment area." The South Coast AQMD portion of San Bernardino County suffers from the worst 24-hour PM 2.5 concentrations and worst 1-hour and 8-hour ozone concentrations in Southern California – between 130 and 180 percent of federal standards, with a significant portion of this impact stemming from goods movement activities. Since long-term exposure to high concentrations of particulate matter and high levels of ozone has been linked to breathing and heart problems, cleaning up the air has been and will continue to be a priority to improve the health of county residents, workers and visitors.

Figure II-21: San Bernardino County Air Districts



Preliminary ozone air quality analysis currently underway in the development of the 2016 AQMP indicates that NOx emissions will need to be reduced by approximately 50% in 2023 and 65% in 2031 (beyond projected 2023 baseline emissions). Projected emissions of NOx from three goods movement sources alone – ships, trains and heavy duty diesel trucks – will be above what is needed to achieve the federal 8-hour ozone standard by 2023, under existing regulations (refer to **Figure II-22**). Not satisfying federal ozone and air quality standards can jeopardize receiving federal transportation funding.

Figure II-22: NOx Emission Reductions to Achieve Federal 8-Hour Ozone Ambient Air Quality Standards



Source: 2016 AQMP White Paper, SCAQMD, September 2015

Tremendous progress has been made on air quality over the last several decades. For example, maximum levels of ozone, one of the South Coast AQMD's worst smog problems, have been cut to less than one quarter of what they were in the 1950s, even though today the region has nearly three times as many people and four times as many vehicles. In the past decade, Stage I smog alerts have been eliminated, which previously occurred 100-120 times a year. The South Coast AQMD has not reached Stage II levels since the 1980s.

However, the freight sector (ships, intermodal facilities, trains, and trucks) will require further advances for the region to reach federal attainment goals for particulates and ozone. This will require a balanced approach to maintain regional and national competitiveness in manufacturing/logistics while at the same time cleaning up the freight sector from an air quality standpoint. San Bernardino County, although it has some of the worst air quality in the region, cannot afford to lose the jobs associated with the logistics industry while this transition occurs.

Conflicts between industrial/warehouse development and residential communities are of concern as well. Impacts include noise from trucks and trains, localized traffic congestion, and visual impacts, among others.

SANBAG and Caltrans, in partnership with local governments, have invested approximately $2.5 billion in the County's transportation network since 2000, significantly benefitting freight mobility. Noteworthy investments include SR-210 completion, I-215 widening and reconstruction of the Devore (I-15/I-215 junction), four freight-related interchanges, eight rail/highway grade separations and the Colton Crossing rail/rail grade separation.

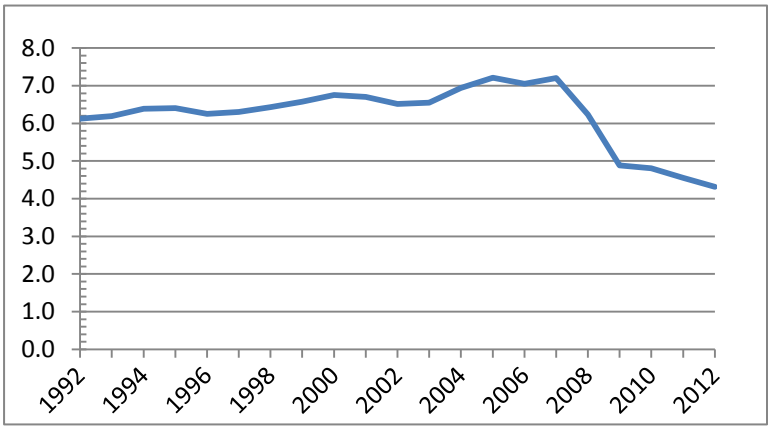
The largest source of funds for the above projects (40%) has been from local Measure I sales tax revenue. Federal funds comprise 25% and state funds the remaining 35%. This speaks to the serious commitment SANBAG and its local and state partners have made to building and maintaining the highway network for both passenger car traffic and trucks.

Airports

Several airports serve the county including general aviation, international, and cargo-focused airports:

- Los Angeles(LA)/Ontario International (ONT)
- San Bernardino International (SBIA)
- Southern California Logistics
- Apple Valley
- Baker
- Barstow-Daggett
- Chino
- Needles
- Twentynine Palms
- Big Bear City
- Cable (Upland)
- Hesperia
- Redlands Municipal

Figure II-23: Ontario International Passengers



Regional airports handled almost $90 billion in international cargo in 2012. The air cargo system in Southern California ranks 2nd in value of traded goods. LA/Ontario International Airport, San Bernardino International Airport and the Southern California Logistics Airport provide cargo services as part of the goods movement chain through the Southern California region. The majority of passenger activity is served by Ontario International Airport although it has experienced a sharp decline in passenger activity

from its peak of 7.21 million annual passengers in 2007 to approximately 4.3 million in 2012 (Refer to **Figure II-23**). Refer to **Figure II-19** for the location of airports throughout the county. The possible transfer of control of ONT from Los Angeles World Airports to the City of Ontario is discussed later in this report.

Active Transportation

A safe, interconnected cycling and walking system can be a major asset to individual communities and to an urban area, particularly one as well suited to these activities as San Bernardino County. The climate and topography are highly conducive for these and other outdoor pursuits. Both natural and man-made corridors provide ideal opportunities for development of a comprehensive system of cycling facilities, pathways, and trails. Even though San Bernardino County is known for its recreational opportunities, such a system is not well developed in many areas of the County. **Figure II-24** presents the existing and planned non-motorized facilities throughout the County.

There are roughly 500 miles of bicycle paths countywide

While the County experienced an eight-fold increase in bicycle infrastructure between 2001 and 2011 (currently there are roughly 500 miles of bicycle paths, lanes, and routes countywide), a particular emphasis is being placed on commuter-related and other utilitarian cycling. Statistics from the American Community Survey (2006-2009) indicate the percentage of trips to work by bicycling and walking in San Bernardino County varies by jurisdiction but is roughly only 0.4% countywide. The walk-to-work percentage is higher, but still only about 1.5%, and this statistic is skewed by very high walk-to-work percentages at the Twentynine Palms Marine Base. As indicated in **Table II-5,** the percent of trips to work by bicycle are low throughout the Southern California Counties, and much of the rest of the United States, so this is a large scale issue that San Bernardino County is not facing alone.

Figure II-24: San Bernardino County Bicycle Facilities

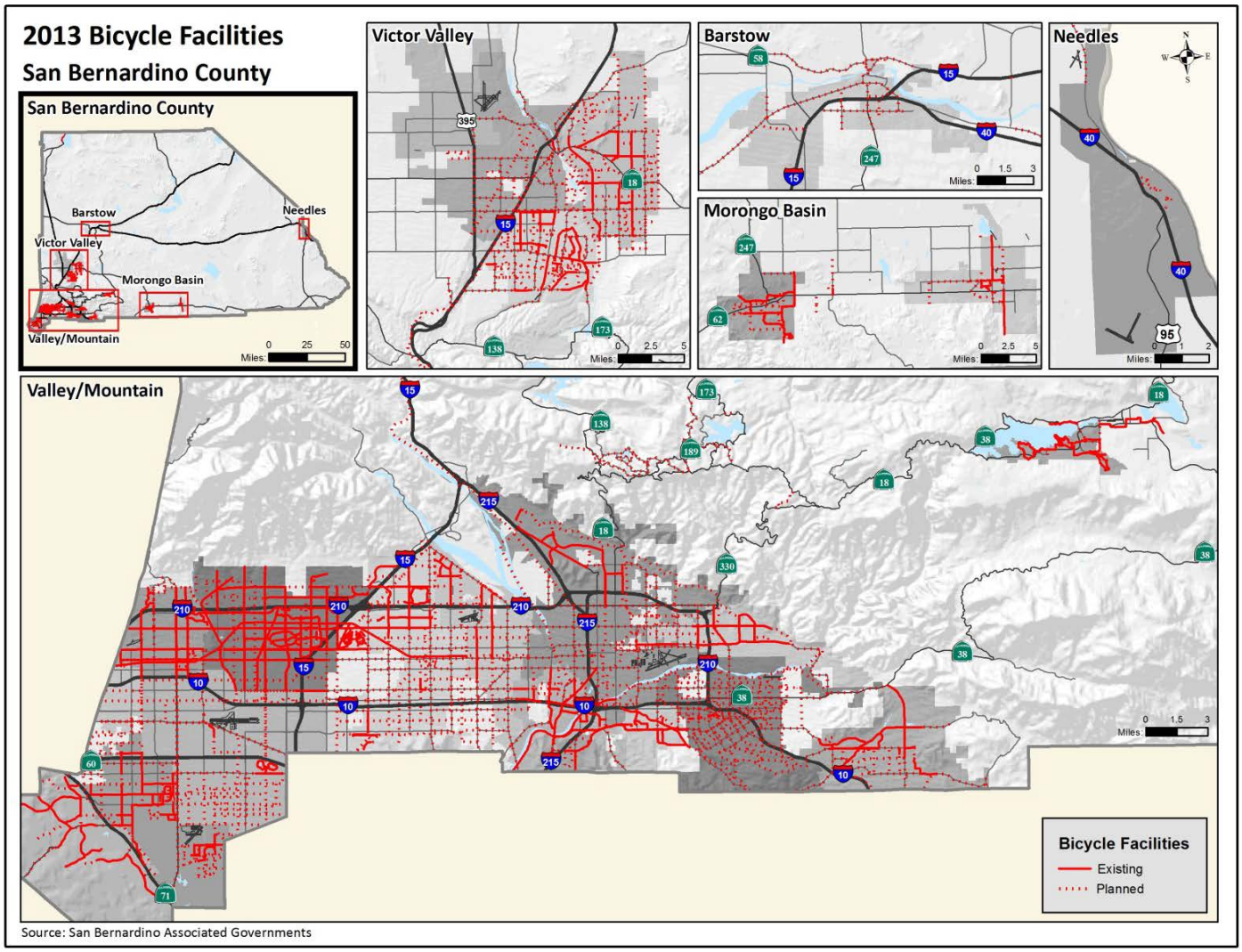


Table II-5: Non-Motorized Trips to Work

County	Total Trips to Work	Bike Trips	Walk Trips	% Bike Trips	% Walk Trips
Los Angeles	3,858,750	20,975	54,630	0.54%	1.42%
Orange	1,313,985	9,500	13,220	0.72%	1.01%
San Bernardino	658,710	2,475	10,070	0.38%	1.53%
Riverside	590,515	2,825	5,810	0.48%	0.98%
Ventura	345,660	2,165	3,930	0.63%	1.14%
Imperial	43,205	195	685	0.45%	1.59%
Total	6,810,825	38,135	88,345	0.56%	1.30%

SANBAG first adopted the San Bernardino County Non-Motorized Transportation Plan (NMTP) in 2001 and has continued to update the NMTP to reflect current local jurisdiction. In addition to representing local efforts, the NMTP also focuses on planning for more walkable communities within and around transit station areas. This is in part a response to the initiatives to reduce vehicle travel and GHG emissions embedded in California Senate Bill (SB) 375 and as well as part of a larger endeavor to develop a Sustainable Communities Strategy (SCS) which will become part of the SCAG RTP. The SCS seeks to improve land use around transit stations and provide pedestrian/bicycle connectivity and amenities that encourage non-motorized transportation. However, while the NMTP is an important start, it is ultimately futile without the needed resources for implementation. The NMTP goals include:

- Increased bicycle and pedestrian access - Expand bicycle and pedestrian facilities and access within and between neighborhoods, to employment centers, shopping areas, schools, and recreational sites.
- Increased travel by cycling and walking - Make the bicycle and walking an integral part of daily life in San Bernardino County, particularly (for bicycle) for trips of less than five miles, by implementing and maintaining a bikeway network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer and more convenient.
- Routine accommodation in transportation and land use planning - Routinely consider bicyclists and pedestrians in the planning and design of land development, roadway, transit, and other transportation facilities, as appropriate to the context of each facility and its surroundings.
- Improved bicycle and pedestrian safety - Encourage local and statewide policies and practices that improve bicycle and pedestrian safety.
- Identify achievable opportunities for deployment of complete streets strategies in a way that recognizes the diversity of urban and rural contexts in San Bernardino County.

Assembly Bill (AB) 1358 requires consideration of complete streets with any substantive revision to general plan circulation elements. Known as the Complete Streets Act of 2008, AB 1358 was developed to assist in the reduction of GHG emissions in California as outlined in the California Global Warming Solutions Act of 2006. The circulation element must plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads and highways.

Complete streets are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. SANBAG is preparing a Complete Streets Strategy to assist local jurisdictions in implementing complete streets policies and projects.

As a coordinated component of the NMTP, SANBAG is developing a Safe Routes to School (SRTS) Inventory to assist local jurisdictions in addressing SCS objectives through the coordinated development of implementable active transportation strategies.

Additional Notes on Bicycles

San Bernardino County has experienced a substantial growth in the non-motorized system during the past decade. In a thirteen year span, the centerline miles of bicycle infrastructure countywide has significantly increased from 53 miles in 2001 to 494 miles in 2014 (refer to **Table II-6**). This represents an eight-fold growth in the County's bicycle infrastructure. Bicycle classes as identified in the table include the following:

- Class I (Share Use or Bike Path): A bikeway physically separated from any street or highway. Shared Use Paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users.
- Class II (Bike Lane): A portion of roadway that has been designated by striping, signaling, and pavement markings for the preferential or exclusive use of bicyclists.
- Class III (Bike Route): Any road, street, path, or way that in some manner is specifically designated for bicycle travel regardless of whether such facilities are designated for the exclusive use of bicycles, or are to be shared with other transportation modes.

The County has several Class I facilities in place for both commuting and recreation such as the Pacific Electric Trail, Santa Ana River Trail, Orange Blossom Trail and the Route 66 Heritage Trail. SANBAG member jurisdictions have continued to extend existing routes and propose new bicycle infrastructure as both population and demand has grown.

Table II-6: City Bike Path Mileage by Class

City	Existing Path Miles by Class				Planned Path Miles by Class				Total Path Miles
	I	II	III	Total	I	II	III	Total	
Adelanto	0	0	0	0	0	5	0	5	5
Apple Valley	11	22	0	33	46	54	14	115	148
Barstow	0	0	0	0	0	37	0	37	37
Big Bear Lake	0	0	10	10	11	41	10	62	72
Chino	3	22	3	28	21	32	0	53	80
Chino Hills	0	22	0	22	0	8	5	12	34
Colton	7	6	14	27	0	18	2	20	47
Fontana	13	28	1	42	22	68	10	99	141
Grand Terrace	0	3	1	4	2	5	0	7	10
Hesperia	3	33	0	36	28	75	15	118	153
Highland	0	16	0	16	5	20	2	28	44
Loma Linda	6	10	0	16	0	4	0	4	20
Montclair	1	2	0	3	0	7	0	7	10
Needles	0	0	0	0	1	2	0	3	3
Ontario	2	2	0	5	41	44	29	114	119
Rancho Cucamonga	14	59	40	113	15	58	15	88	202
Redlands	1	0	0	1	25	76	35	136	137
Rialto	2	10	0	12	3	35	9	47	59
San Bernardino	3	15	0	17	45	58	1	104	121
SANBAG	0	0	0	0	10	0	0	10	10
Twentynine Palms	7	6	0	14	6	17	0	23	36
Unincorporated	9	0	4	14	9	231	108	349	363
Upland	6	22	12	40	2	17	0	19	59
Victorville	1	0	0	1	21	69	4	94	94
Yucaipa	2	17	0	19	0	29	0	29	49
Yucca Valley	0	0	23	23	6	39	1	46	70
Grand Total	**91**	**296**	**107**	**49**	**320**	**1,048**	**261**	**1,629**	**2,124**

Source: SANBAG

Additional Notes on Pedestrians

Automobile travel is the predominant mode of transportation and as such has historically been the targeted user of transportation infrastructure. This has left pedestrians at a significant disadvantage when it comes to access and safety. In the years 2007 to 2011, pedestrians have been involved in nearly 2,300 vehicle involved collisions countywide. The result was 206 untimely deaths, 336 severe injuries that often plague the injured party for life, and 1,753 less serious injuries.

Improving pedestrian safety and access through more adequate transportation infrastructure and inclusive land use is a high priority. Focus is currently on creating safe routes to schools and implementing SANBAG's award winning *Improvements to Transit Access for Cyclists and Pedestrians* Report (November 2012). Regional priorities for pedestrian planning include:

- Improving pedestrian access to transit
- Removing existing barriers to pedestrian travel
- Development of regional trails and pathways which provide improved pedestrian access to destinations
- Improvement of the pedestrian environment on major regional arterials and at regional activity centers

Travel Demand Management

Park and Ride Services

Park and ride facilities are located to encourage ridesharing, vanpooling and transit use by providing convenient access to transportation services. Park and ride facilities within San Bernardino County are free and generally publicly owned. Private park and ride lots exist, generally at churches where no overnight or weekend parking is allowed.

Rideshare Services

SANBAG encourages commuters to carpool, vanpool, use public transit, cycle or walk to work by working directly with large and small employers to provide support to commuters that use alternative forms of transportation. SANBAG partners with the Riverside County Transportation Commission (RCTC) to provide rideshare program assistance through the IE Commuter Program. SANBAG is currently

pursuing expansion of regional vanpool services to cover additional areas of San Bernardino County. A vanpool program currently exists for the Victor Valley.

Inland Empire 511 Motorist Aid Traveler Information System

SANBAG partners with RCTC to maintain a free traveler information service that provides transit and commuter service information via the web (www.IE511.org) or a toll-free number (1-877-MY-IE511). The system was launched in April 2010 and provides robust, up to the minute traffic and mobility options to travelers. The 511 service helps commuters avoid delays, identify freeway closures, and identify alternative transportation options such as transit and ridesharing. The service also improves overall traffic congestion, mobility and quality of life.

511 TRAFFIC INFO ALL THE TIME

Call Boxes/Freeway Service Patrol

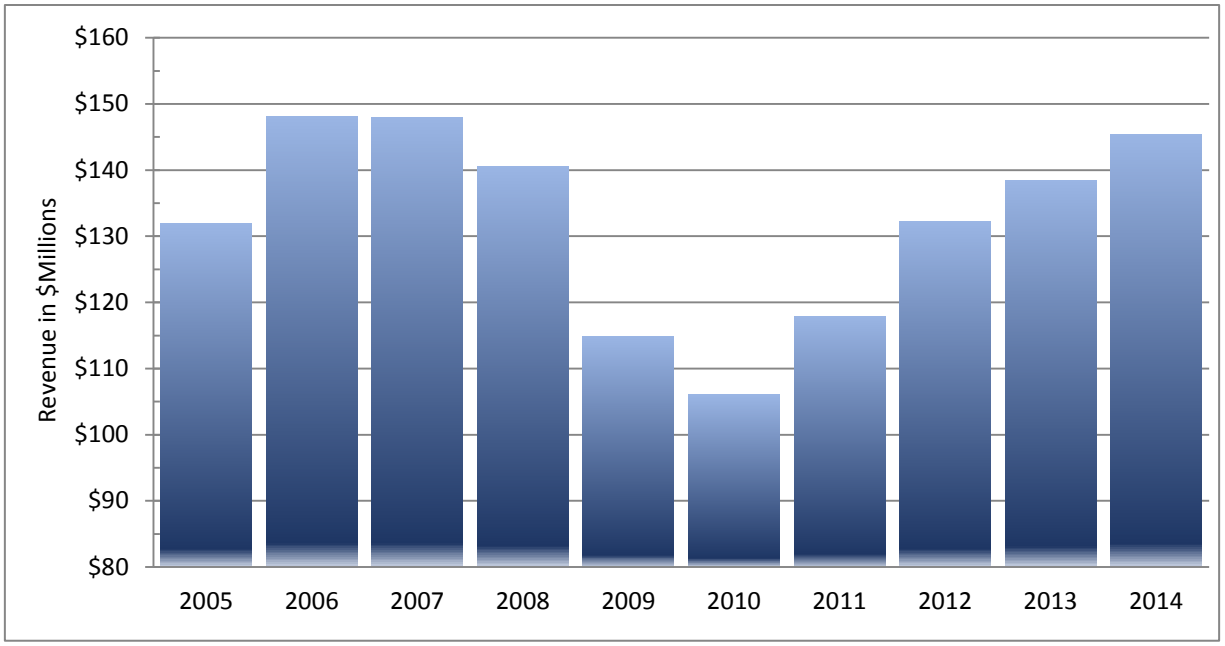
As the Service Authority for Freeway Emergencies (SAFE) for San Bernardino County, SANBAG operates an array of freeway services to provide assistance to motorists. SANBAG maintains approximately 1,300 call boxes along most State, Interstate and US Highways assisting over 1.6 million motorists since 1990. In 2006 Freeway Service Patrols (FSP) were initiated to provide roving tow truck assistance on select urban freeways during peak commute periods.

III. Financial Forecast

Background

An extension of the Measure I half-cent sales tax for transportation was passed by the voters of San Bernardino County in November 2004, and revenue collection began in April 2010. The Measure I Expenditure Plan, adopted as part of the Measure I extension, delineates how this funding is to be distributed by geographic subarea and program. **Figure III-1** shows the last 10 years of countywide Measure I revenue, from Fiscal Year 2003/2004 through 2013/2014. The revenue tends to follow economic cycles, from the robust growth in the mid-2000s, to the severe downturn in 2009-2012, to the current cycle of recovery.

Figure III-1: Measure I Historical Revenue



The Measure I 2010-2040 Strategic Plan was adopted by the SANBAG Board in April 2009 to further develop the policy framework by which the allocation of Measure I funds would occur, through 2040. The Strategic Plan also required the development of a Ten-Year Delivery Plan, to be periodically updated. The purpose of the Ten-Year Delivery Plan is to provide a list of Measure I projects to be developed and funded during each subsequent ten-year window of time and to define the scope, schedule and budget for these projects. The Delivery Plan establishes a common understanding among members of the SANBAG Board, staff, member agencies and citizens of San Bernardino County, setting a baseline upon which commitments of revenues, project costs, scopes and schedules are measured. The Delivery Plan is updated every two years with more current information.

The Measure I Strategic Plan structures funding programs and policies to ensure that revenues are expended in a way that is consistent with voter intent. The Strategic Plan includes policies on how revenue is to be invested within each of the Measure I Subareas and programs. Measure I has a return-to-source provision stating that funds will be allocated to subareas in accordance with the actual sales tax revenue collected in each subarea. Based on revenue projections, the Expenditure Plan estimated

Measure I funds to be allocated among the subareas and the Cajon Pass as noted in **Figure III-2.** However, these percentages change over time based on the growth rates in taxable sales by subarea.

When the initial Measure I 2010-2040 Expenditure Plan revenue estimates were prepared in 2004, it was anticipated that approximately $6 billion (in 2004 dollars) would be collected to support transportation projects throughout the County through 2040. In 2006, the SANBAG Board adopted $8 billion as the Measure I revenue forecast. In 2008, the forecast was reassessed and projected to be $7.25 billion. However, revenue dropped dramatically during the recession (refer to **Figure III-1**), and forecasts have been adjusted downward to $5.4 billion (2013 dollars). Based on the infrastructure investment commitments defined in the Delivery Plan, the focus of the Countywide Transportation Plan is to evaluate anticipated revenue for transportation through the life of Measure I and identify appropriate uses of that revenue.

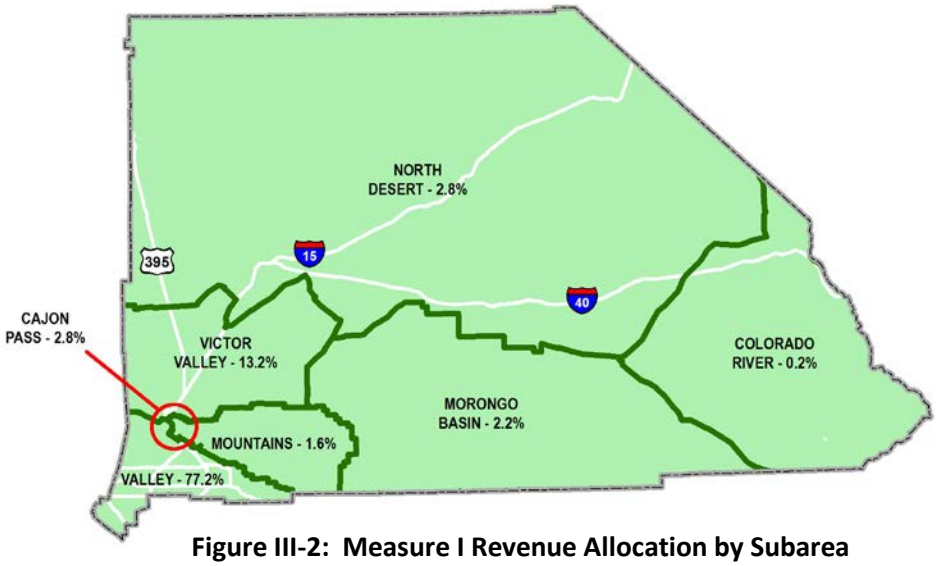


Figure III-2: Measure I Revenue Allocation by Subarea

Baseline and Aggressive Scenario Revenue Forecasts

Two revenue forecasts were identified in the CTP, one corresponding to the Baseline Scenario and one corresponding to the Aggressive Scenario, as will be further described in Section IV. The Baseline Scenario assumes traditionally available funding sources, while the Aggressive Scenario assumes the additional increment of funding projected in SCAG's "financially constrained" scenario in the 2012-2035 RTP/SCS.

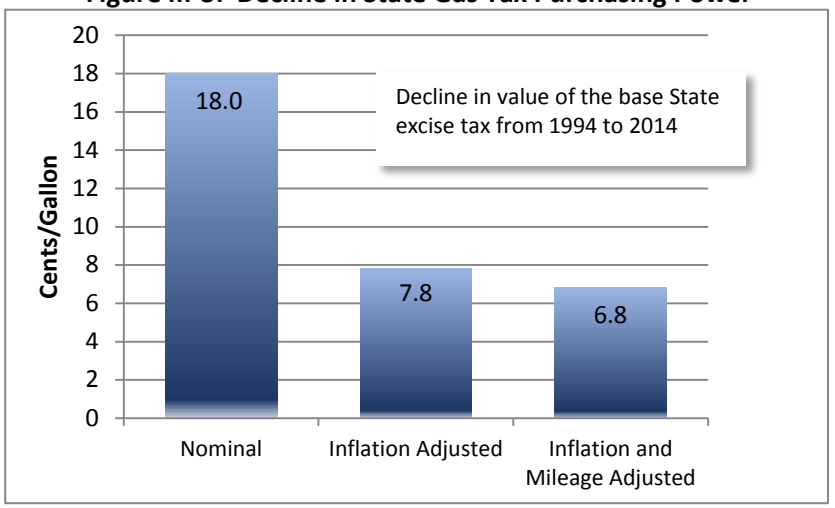
The initial step in developing the Baseline financial forecast was to evaluate the assumptions included in the Delivery Plan and extend those revenue assumptions from 2023 out to 2040. State and Federal funding continues to be an important component in the delivery of Measure I projects. However, the purchasing power of State and Federal funding has been steadily declining over the past twenty years. In California, through the mid-1990's, State and Federal transportation revenues accounted for almost 75% of total transportation funding. However, less than ten years later, that share has dropped to approximately 51%. The availability of State funding is highlighted by the decline in purchasing power of the state excise tax on gas from 1990 to 2014 (refer to **Figure III-3**) The Expenditure Plan estimates a proportional share of State and Federal funds to be distributed among the subareas.

For consistency purposes, State and Federal revenue streams have been assumed to remain flat (i.e. no increases or reductions in funding from current levels) after completion of the Delivery Plan through the life of Measure I. **Table III-1** presents Federal, State and local revenue forecasts in 2014 dollars that are projected to be available subsequent to delivery of projects in the Delivery Plan. The funding scenario also assumes delivery of express lanes on I-10 and I-15, along with the associated toll revenues. This

revenue will be the basis of determining transportation investments beyond those projects committed in the Ten-Year Delivery Plan.

Table III-2 identifies the various projects included in the Delivery Plan. The Delivery Plan forecasts Measure I revenue during the Delivery Plan timeframe, i.e. 2013 – 2023, to be approximately $1.6 billion. It is estimated another $950 million would be available from Federal funds and $1.5 billion available from State revenue sources during the Delivery Plan timeframe.

Figure III-3: Decline in State Gas Tax Purchasing Power



Source: Caltrans

Estimated Development Impact Fee (DIF) funds are not presented in Table III-1, but are assumed to be available at the levels necessary to match SANBAG shares per the Nexus Study. Based on the most recent 2013 Nexus Study cost estimates, approximately $2.0 billion in DIF funds are anticipated to be collected during the life of Measure I for arterial, grade separation and interchanges projects.

The revenue for the Valley Freeway Interchange Program is what would be available in uncommitted interchange funds following completion of the top ten interchanges on the priority list, plus I-10/Pepper. The grade separation portion of the Valley Major Street Program has no additional Measure I revenue beyond the Ten-Year Delivery Plan under current projections.

Approximately $2.0 billion in Development Impact Fees funds are anticipated to be collected during the life of Measure I

The Valley Major Street Arterial Program is not shown, as jurisdictions have access to a formula share of the revenues available to that program under the "Equitable Share" policy. Local jurisdictions decide which of their Nexus Study projects to fund in any given year. None of the estimates for the Measure I Local Street pass-through or Senior and Disabled Transit programs are shown, given the generally formula-based nature of these ongoing programs. Only the Major Local Highways Program funding is shown for the Mountain/Desert subareas. The Delivery Plan shows substantial commitments of those funds for the Victor Valley, although $84 million in funds are projected for additional projects through 2040. The other Mountain/Desert subareas have relatively small commitments of Measure I Major Local Highways funding in the Delivery Plan.

To facilitate implementation of active transportation infrastructure, in March 2015, the SANBAG Board of Directors approved amendments to several Measure I Strategic Plan Policies (40003, 40006, 40012 and 40016). Text was added to note that 'construction or maintenance of off-roadway bicycle facilities that benefit roadway safety or traffic flow is an allowable expense of Measure I arterial funds.

Table III-1: Estimate of Uncommitted Revenue Beyond the Ten-Year Delivery Plan

Revenue Source	Uncommitted Revenue Beyond Ten-Year Delivery Plan (thousands of 2014 dollars)
Measure I Programs	
Valley Freeway	$123,000
Valley Freeway Interchanges	$134,000
Valley Major Streets - Grade Separations	$0
Valley Metrolink/Rail Capital	$17,000
Valley Express Bus/BRT Capital and Operations	$149,000
Cajon Pass	$56,000
Victor Valley Major Local Highways	$84,000
North Desert Major Local Highways	$34,000
Mountains Major Local Highways	$18,000
Morongo Basin Major Local Highways	$24,000
Colorado River Major Local Highways	$3,000
Federal	
Congestion Management Air Quality Valley	$171,000
Congestion Management Air Quality Mountain/Desert	$134,000
Surface Transportation Program Valley	$130,000
Surface Transportation Program Mountain/Desert	$42,000
FTA Section 5307	$89,000
State	
State Transit Assistance Fund Valley	$66,000
State Transit Assistance Fund Mountain/Desert	$61,000
Regional Improvement Program (aka STIP) Valley	$80,000
Regional Improvement Program (aka STIP) Mountain/Desert	$220,000

Source: SANBAG, 2014

Congestion Mitigation and Air Quality (CMAQ), Surface Transportation Program (STP) and State Transportation Improvement Program (STIP) funding is estimated only for the Valley and overall Mountain/Desert areas. It is worth noting that the amount of uncommitted State and Federal funding (approximately $1 billion) is much larger than the uncommitted Measure I, in part because substantial bonding against Measure I is projected by the Delivery Plan to occur to deliver the projects at an early date. The debt service for this bonding is considered to be committed revenue in the Delivery Plan. This means that additional State and Federal funding for capital projects will be freed up following the delivery of the Delivery Plan projects, as such funding can only be used concurrent with project delivery.

Operating and maintenance costs are always a concern as highway maintenance and transit operations funding typically lags behind actual needs. Local jurisdictions have become increasingly concerned that future maintenance funding will be insufficient to cover basic maintenance requirements. With regards to transit operations, SANBAG currently forecasts that highway maintenance and transit operating obligations under the Baseline Scenario can marginally survive with modest annual increases in operating costs and conservative estimates of future State and Federal revenue. However, this means that highway pavements will not keep up with performance standards, and transit expansion beyond the Ten-Year Delivery Plan will be minimal.

Table III-2: Ten-Year Delivery Plan Projects

Measure I Programs	
Cajon Pass Subarea Program	
I-15/I-215 (Devore) Interchange	
San Bernardino Valley Freeway Program	
I-10 Widening (HOV or Express Lanes) from LA County Line to Ford Street	
I-15 Express Lanes from Riverside County Line to I-215	
I-215 Widening from Riverside County Line to I-10	
I-10 Truck Climbing Lane from Live Oak to Riverside County Line	
SR-210 Widening from Highland Avenue to I-10	
San Bernardino Valley Freeway Interchange Program	
I-10/Cherry Avenue	I-10/Alabama Street
I-10/Citrus Avenue	I-15/Baseline Road
I-10/Tippecanoe Avenue Phase 1 & 2	I-10/Mount Vernon Avenue
I-10/Cedar Avenue	SR-60/Archibald Avenue
SR-210/Baseline Road	I-10/Monte Vista Avenue
SR-60/Central Avenue	I-10/Pepper Avenue Phase 2
I-10/University Avenue	I-10/Riverside Avenue Phase 2
I-215/University Parkway	
San Bernardino Valley Major Street Program	
North Vineyard Avenue Grade Separation (Union Pacific)	
South Milliken Avenue Grade Separation (Union Pacific)	
Glen Helen Parkway Grade Separation (Burlington Northern-Santa Fe)	
Palm Avenue Grade Separation (Burlington Northern-Santa Fe)	
Laurel Avenue Grade Separation (Burlington Northern-Santa Fe)	
San Bernardino Valley Metrolink/Passenger Rail Program	
Downtown San Bernardino Rail	
Redlands Passenger Rail	
San Bernardino Line Double Track (Preliminary Engineering)	
Gold Line to Montclair (Environmental Documentation/Preliminary Engineering)	
Valley Express Bus & Bus Rapid Transit Program	
E Street Bus Rapid Transit	
Victor Valley Major Local Highway Program	
Yucca Loma Corridor – Yucca Loma Bridge and Yates Road	
I-15/Ranchero Road Interchange	
Yucca Loma Corridor – Green Tree Boulevard Extension	
US-395 Widening from SR-18 to Chamberlaine Way	
Ranchero Road Corridor	
North Desert Major Local Highway Program	
Lenwood Road Grade Separation	

Source: SANBAG Measure I 2010-2040 Ten-Year Delivery Plan, March 2014

The Federal Transportation Improvement Program (FTIP) is a listing of all capital transportation projects proposed over a six-year period for the SCAG region. The projects include highway improvements, transit, rail and bus facilities, high occupancy vehicle lanes, signal synchronization, intersection improvements, freeway ramps, etc. In the SCAG region, a biennial FTIP update is produced on an even-year cycle. The FTIP is prepared to implement projects and programs listed in the RTP/SCS and developed in compliance with state and federal requirements. County Transportation Commissions have the responsibility under State law to propose county projects, using the current RTP's policies, programs, and projects as a guide, from among submittals by cities and local agencies. The current FTIP project list for San Bernardino County includes projects totaling approximately $6.5 billion. Based on known local, State and Federal sources, all RTP projects (which includes the full FTIP project list) identified for San Bernardino County cannot be implemented with traditionally available resources.

The Federal Transportation Improvement Program includes projects totaling approximately $6.5 Billion in San Bernardino County

The 2012 RTP/SCS financially constrained "Plan" alternative included approximately $12 billion in capital improvement projects and $12 billion in operations and maintenance (assuming year of expenditure dollars) for projects throughout San Bernardino County. This SCAG funding forecast is generally consistent with assumptions for the CTP Aggressive Scenario.

The SCAG RTP/SCS includes a set of innovative funding sources that go above and beyond the revenue projected from traditional funding sources. Innovative funding sources and new revenue sources included in the RTP/SCS are noted in **Table III-3**. The SANBAG Board has not endorsed the Aggressive Scenario revenue estimate, but it falls within FHWA's definition of reasonably foreseeable funding sources for purposes of the SCAG RTP/SCS. The State of California is pursuing a pilot study to test the feasibility of a mileage-based user fee or "road charge." This pilot study will help to inform SCAG and other agencies in the region regarding future revenue estimates.

Table III-3: New Revenue Sources and Innovative Financing Strategies for2012 RTP/SCS

Revenue Source	Total Anticipated Revenue
Bond proceeds from local sales tax measures	$25.6 B
State and Federal gas excise tax adjustment to maintain historical purchasing power	$16.9B
Mileage-based user fee	$110.3 B*
Highway tolls	$22.3 B
Private equity participation	$2.7B
Freight Fee/National Freight Program	$4.2 B
E-Commerce tax	$3.1B
State Bond Proceeds, Federal Grants, and Other for California High-Speed Rail	$33.0 B
Value capture strategies	$1.2B

Notes: * Estimated incremental revenue only
Source: SCAG 2012/2016 RTP/SCS

IV. Future of the Subregion

San Bernardino County has experienced significant growth over the past few decades. Growth is expected to continue at a steady pace, placing added demands on the transportation system, water resources and other environmental resources. Section IV of the CTP examines future growth within the County and evaluates the demands that growth will place on the transportation system. It also addresses SANBAG's approach to sustainability issues.

Over 80% of the County's land is under federal or tribal control and unavailable for private development.

Growth Forecasts

As stated earlier, San Bernardino County is geographically large – over 20,000 square miles. The other five counties in the SCAG region (Imperial, Los Angeles, Orange, Riverside, and Ventura) could all fit within San Bernardino County. However, over 80% of the County's land is under federal or tribal control and unavailable for private development.

San Bernardino County's population growth rate averaged 1.6% per year between 2000 and 2012. While this growth rate may not be sustained into the future, substantial growth is still expected throughout the county. A developable land analysis conducted by the County of San Bernardino reveals that only 15% of the county's land remains for private development, this still represents substantial development potential – more than twice the land area of all of Orange County (948 square miles). Countywide population is forecast to grow from 2,068,000 in 2012 to 2,791,000 by 2040, an increase of 32% representing an annual increase of 1.1% (refer to **Table IV-1**).

Figure IV-1 presents the population density associated with new growth (i.e. excludes existing population) expected by 2040. This indicates that while the San Bernardino Valley continues to grow, growth is also anticipated throughout the Victor Valley and other parts of the county. Employment is forecast to grow by 56% by 2040 representing an annual growth rate of 1.6%. Forecast employment growth exceeds population growth to correct for the high unemployment rate experienced during the recession. The aggressive employment growth forecast results in a 2040 unemployment rate that is closer to the historical average and also assumes an increasing jobs/household ratio over time.

By 2040, countywide employment is forecast to increase by 56%

Figure IV-2 presents the employment density for the growth in employment anticipated between 2012 and 2040. Evaluation of the population and employment growth trends provides the basis for understanding how mobility may be impacted by the forecast growth. Concentrations of population and employment growth in areas that currently experience congestion require careful consideration to ensure efficient mobility is provided for current and future transportation system users.

General indications of future infrastructure needs can be assessed through a review of **Figure IV-1** and **Figure IV-2**. While population growth is expected throughout the County, there are some key areas where particularly significant growth is expected. Notable areas that anticipate significant increases in population include southern Chino, the New Model Colony in southern Ontario, the northern parts of Fontana along I-15/SR-210, the western portion of Victorville and the Tapestry development in southern Hesperia. All of these areas will require further development of the arterial system, consideration of access to the freeway system as well as future transit service.

Continued growth in employment requires consideration of both highway and transit accessibility to jobs. While funding for transit infrastructure and service is limited, thoughtful land use planning can make it easier to invest in and operate multi-modal transportation options. Several key employment nodes are visible from **Figure IV-2**, including areas adjacent to the Ontario International Airport, Downtown San Bernardino and key freeway interchanges along the I-15 and I-10 corridors, among others.

Table IV-1: San Bernardino County Forecast Population and Employment Growth

	Population				Employment			
Jurisdiction	2012	2040	Growth	% Growth	2012	2040	Growth	% Growth
Adelanto	31,145	69,977	38,832	124.7%	3,885	7,753	3,868	99.6%
Apple Valley	70,162	100,558	30,396	43.3%	15,417	27,564	12,147	78.8%
Barstow	23,069	35,108	12,039	52.2%	8,135	16,785	8,650	106.3%
Big Bear Lake	5,094	6,915	1,821	35.7%	3,840	5,400	1,560	40.6%
Chino	79,447	120,394	40,947	51.5%	42,580	50,568	7,988	18.8%
Chino Hills	75,765	94,895	19,130	25.2%	11,471	18,580	7,109	62.0%
Colton	52,768	69,070	16,302	30.9%	16,826	29,200	12,374	73.5%
Fontana	200,228	280,867	80,639	40.3%	47,011	70,815	23,804	50.6%
Grand Terrace	12,200	14,170	1,970	16.1%	2,153	5,341	3,188	148.1%
Hesperia	91,122	129,054	37,932	41.6%	14,909	28,343	13,434	90.1%
Highland	53,739	66,878	13,139	24.4%	5,532	10,206	4,674	84.5%
Loma Linda	23,409	29,259	5,850	25.0%	16,665	21,147	4,482	26.9%
Montclair	37,198	42,749	5,551	14.9%	16,523	19,017	2,494	15.1%
Needles	4,898	7,030	2,132	43.5%	2,235	3,790	1,555	69.6%
Ontario	166,328	258,612	92,284	55.5%	103,312	175,389	72,077	69.8%
Rancho Cucamonga	170,104	204,346	34,242	20.1%	69,901	104,620	34,719	49.7%
Redlands	69,585	85,540	15,955	22.9%	31,732	53,400	21,668	68.3%
Rialto	100,836	111,980	11,144	11.1%	21,076	30,529	9,453	44.9%
San Bernardino (City)	211,943	257,410	45,467	21.5%	88,576	128,624	40,048	45.2%
Twentynine Palms	25,875	37,321	11,446	44.2%	4,336	8,510	4,174	96.3%
Upland	74,660	81,727	7,067	9.5%	31,684	43,471	11,787	37.2%
Victorville	119,595	184,545	64,950	54.3%	29,794	52,700	22,906	76.9%
Yucaipa	52,270	72,514	20,244	38.7%	8,160	15,004	6,844	83.9%
Yucca Valley	20,951	26,328	5,377	25.7%	6,053	10,030	3,977	65.7%
Unincorporated County	295,587	344,077	48,490	16.4%	57,357	91,119	33,762	58.9%
County	2,067,978	2,731,324	663,346	32.1%	659,163	1,027,905	368,742	55.9%

Source: SANBAG, SCAG

Figure IV-1: Population Growth Density

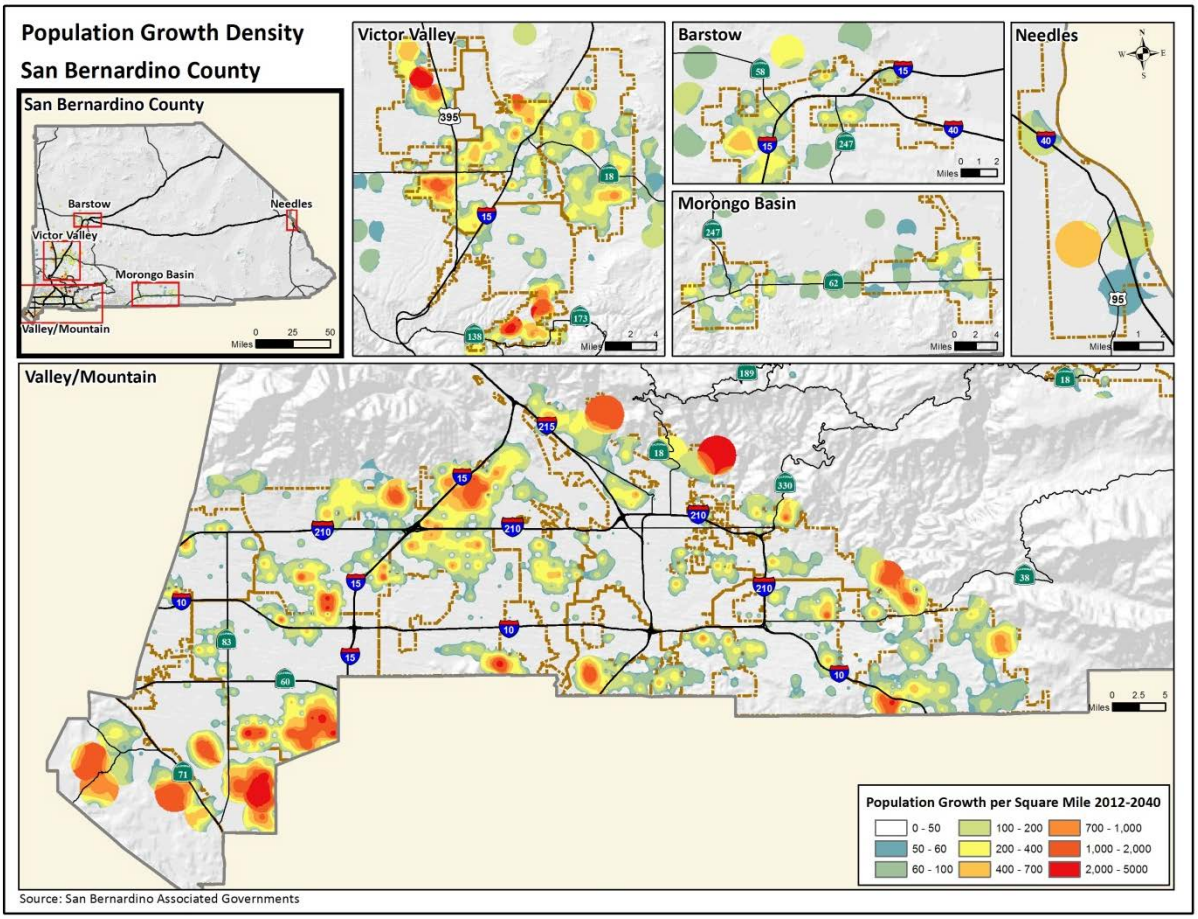
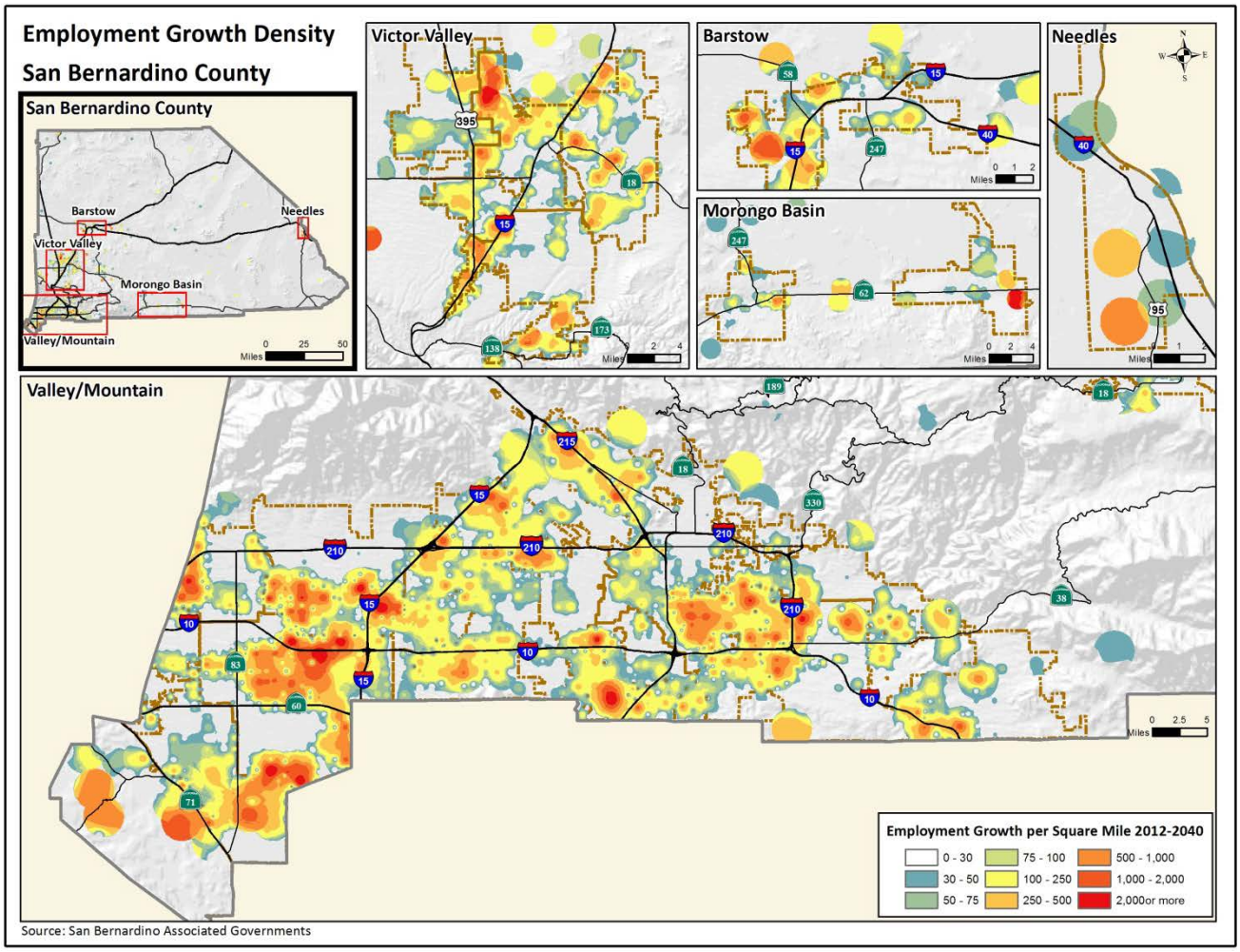


Figure IV-2: Employment Growth Density



Sustainability

SANBAG's CTP is built on a foundation of economic and environmental sustainability. It recognizes that mobility and smart land development are needed to sustain the economic growth and competitiveness necessary for survival within the global economy. This economic growth is needed, in turn, to fund the array of statewide and regional sustainability commitments. San Bernardino County must invest in all modes of transportation, including highways, to support its businesses and growing population. Although SANBAG and its partners are aggressively pursuing sustainable approaches to transportation and land use, in support of SB 375, capacity enhancements to the system will still be needed.

It must also be recognized that many of these sustainability concerns are interconnected. Without economic sustainability, environmental sustainability is more difficult to achieve. Jurisdiction staff must devote themselves to maintaining core functions and may not have all the resources needed to focus on environmental sustainability goals. Yet environmental and energy issues could have long term implications on economic sustainability. Economic, energy, and environmental sustainability must be approached holistically, understanding these inter-dependencies.

The analysis conducted by Caltrans for the California Transportation Plan has indicated that the key to meeting GHG reduction goals will involve transformation of the passenger vehicle and freight transportation fleets. While VMT reductions through transit and land use strategies and TDM initiatives will contribute, the most dramatic reductions will come from vehicle and fuel technology improvements. That said, SANBAG and its partner agencies are aggressively pursuing rail and bus transit improvements and strongly encouraging TOD by local jurisdictions with transit stops/stations along those facilities. The emphasis on Active Transportation, TDM and TSM continues, as well as non-transportation initiatives such as the countywide GHG reduction plan and habitat conservation.

Overall, the following specific sustainability activities could be considered SANBAG focus areas, in partnership with transit agencies and local jurisdictions:

1. Expansion of the transit network
2. Facilitation of transit oriented development
3. Implementation of the Non-Motorized Transportation Plan
4. Development of a habitat preservation/conservation framework
5. Implementation assistance to local jurisdictions in response to the Greenhouse Gas Reduction Plan
6. Development of a "complete streets" and Safe Routes to School Strategy
7. Continuation of the Home Energy Renovation Opportunity (HERO) Program and alternative energy programs
8. Facilitation of truck retrofit programs for San Bernardino County businesses
9. Facilitation of Plug-in Electric Vehicle (PEV) installations countywide

The discussion below provides a snapshot of some of SANBAG's sustainability initiatives.

Sustainability MOU with SCAG

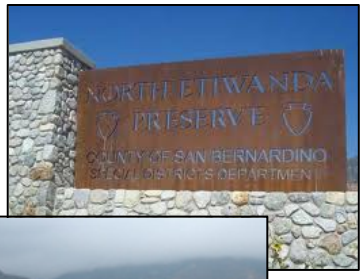
SANBAG and SCAG reached a milestone on the path toward sustainability when the joint sustainability Memorandum of Understanding (MOU) was approved by both agencies: by SANBAG in November 2013 and SCAG in February 2014. The MOU identifies 16 specific initiatives on which both agencies can focus as we jointly seek to develop a more sustainable San Bernardino County and Southern California region. Most of the initiatives are directly supportive of SB 375 goals, but some are focused on the broader goals of GHG reduction strategies outlined in AB32. Some of these initiatives are described in more detail below. The MOU can be accessed at http://www.sanbag.ca.gov/planning2/plan_county-wide-transit.html.

The San Bernardino Countywide Vision

Well before the joint SANBAG/SCAG sustainability MOU was approved, SANBAG, the County of San Bernardino, and our other local jurisdiction and regional partners were taking steps to develop a more sustainable county. The Countywide Vision Statement, approved by the County of San Bernardino and all 24 cities in the County in 2011, was a bold step, setting the County on a sustainable course for nine distinct sectors or elements. In fact, one of the core principles of the Vision states:

> "We envision a sustainable system of high-quality education, community health, public safety, housing, retail, recreation, arts and culture, and infrastructure, in which development complements our natural resources and environment."

Subsequent to the 2011 approval of the Vision Statement, progress has been made, to varying degrees, on the nine vision elements: jobs/economy, education, environment, wellness, housing, infrastructure, public safety, quality of life, and image. The focus of this transportation strategy is on sustainability issues that fall within the domain of SANBAG in its role as Council of Governments (COG), County Transportation Commission (CTC), or County Transportation Authority (CTA). The goal is to better define a realistic set of paths forward on the sustainability fronts where SANBAG has a role.



Development of a Habitat Preservation/Conservation Framework

SANBAG is involved with habitat conservation principally as part of its efforts to mitigate its own transportation projects. For example, the Etiwanda Preserve (County Service Area 120) was established through the mitigation for the SR-210 Freeway, constructed in the late 1990s and early 2000s. Recently, SANBAG, in partnership with the County, led a study to develop a countywide habitat

preservation/conservation framework. The purpose was to explore opportunities for more comprehensive approaches to habitat preservation/conservation than the project-by-project mitigation that has generally been the case in the past. The intent is a win-win scenario in which conservation objectives are achieved while also streamlining the environmental approvals for development projects. The effort is guided by the Environment Element group, established as a multi-disciplinary team representing both public and private stakeholders. The next steps will involve development of an inventory and tracking system and completion of a conservation gap analysis.

Implementation Assistance to Local Jurisdictions in Response to the Greenhouse Gas Reduction Plan

SANBAG is leading a project entitled Development of Climate Action Plan (CAP) Implementation Tools. The intent of this effort is to assist local jurisdictions in implementing their own city-level Climate Action Plans based on the results of the now complete Regional Greenhouse Gas Reduction Plan and EIR. The project is providing CAP implementation templates, development screening tools, and guidelines for administration and maintenance of the CAPs, substantially simplifying the next steps for CAP implementation. Future efforts may be required to update CAPs based on actions of the State related to AB 32, and SANBAG may have a continuing role to provide assistance, if the cities view this to be in their interest.

Home Energy Renovation Opportunity (HERO) Program and Alternative Energy Programs

The HERO Program began in 2013, and provides financing opportunities to encourage installation of energy efficiency improvements, distributed generation, renewable energy sources, water efficiency improvements, and electric vehicle charging infrastructure for residential and commercial property owners. SANBAG has partnered with Renovate America, Inc. and SAMAS Capital to make HERO available to all participating cities and the County. The HERO Program is also an economic development program helping to create local jobs, save money, increase property values and lower GHG emissions.

SANBAG is also proceeding in 2014 with solar power initiatives in partnership with interested cities and other public entities. Participation may be through either power purchase agreements or financing of solar installations on public buildings. SANBAG's involvement in both the HERO program and the solar power initiatives represent implementation strategies for GHG reduction commitments of local jurisdictions through their climate action plans.

Truck Retrofit Programs for San Bernardino County Businesses

SANBAG received two grants in 2009, one under the Department of Energy Clean Cities' Petroleum Reduction Technologies Projects for the Transportation Sector and a matching grant from the California Energy Commission to convert over 200

Ryder tractor/trailer trucks to natural gas, construct two natural gas fueling stations, improve maintenance facilities, and provide training. The grants totaled $36.3 million and were combined with Ryder corporate contributions to carry out the conversions.

Based on this successful venture, SANBAG could seek additional opportunities for truck retrofit projects, as grant opportunities arise. Grant opportunities may include federal, state, and regional sources. However, SANBAG need only become involved where other entities are not in a position to do so. Since 2009 the South Coast Air Quality Management District (SCAQMD) has awarded more than $225 million in state Proposition 1B funds to help replace or retrofit more than 4,500 older diesel trucks. Last year, SCAQMD targeted outreach to smaller fleets with three or fewer trucks that will need to meet new California regulations that take effect in 2015. The availability of Proposition 1B funding is coming to an end, and other grant opportunities will need to be pursued. SANBAG may have a role as a partner with federal, state, or regional agencies to facilitate truck retrofit or conversions. Part of the rationale for SANBAG involvement is the need to attain air quality standards for PM 2.5 and ozone, which must be demonstrated through the SCAQMD Air Quality Management Plan and the State Implementation Plan (SIP) for air quality.

Plug-in Electric Vehicle (PEV) Installations Countywide

The SCAG Electric Vehicle Program has recently released the Regional Electric Vehicle Readiness Plan (Plan). A copy of the Plan is available at http://www.scag.ca.gov/programs/Pages/PEVReadinessPlan.aspx.

A recent presentation by SCAG staff reviewed key findings relevant to the SANBAG region and ways in which local jurisdictions can begin to lay the foundation for an electric vehicle charging network. SANBAG can play a role in facilitating PEV charging station implementation by local jurisdictions at key locations and by addition of charging stations at locations for which we have direct or indirect responsibility. Substantial grant opportunities exist for PEV charging stations.

SANBAG's Role in Sustainability

It is not SANBAG's intent to take over local jurisdiction responsibilities but to collaboratively determine with them how to move the sustainability agenda forward in an achievable way and in a way that will also promote the goals of the Countywide Vision and CTP. Overall, the following sustainability roles could be envisioned for SANBAG:

1. Implement the sustainability activities in the SANBAG/SCAG MOU. Note that these activities focus on environmental and energy sustainability, which includes partnering with local jurisdictions on sustainable land use strategies.
2. Facilitate the implementation of sustainability goals through collaborative efforts with the local jurisdictions and transit agencies.
3. Pursue grant funding to accelerate implementation of sustainability activities, where possible.
4. Monitor countywide progress on sustainability activities.

Impacts of Growth on System Performance

Future transportation demands will take a toll on our infrastructure, absent significant investments. **Table IV-2** presents the growth in regional person trips anticipated based on forecast population and employment growth. Trips between San Bernadino and neighboring counties will continue to increase as demonstrated in **Table IV-2**. **Figure IV-3** demonstrates graphically the forecast interaction with adjacent counties. San Bernardino residents commuting to jobs in Orange and Los Angeles Counties will continue to strain key transportation corridors.

Transportation modeling shows that future growth will result in breakdowns in the countywide transportation system. A "No Build" future year 2040 scenario was modeled that assumes no improvements in the transportation system while accounting for future population and employment growth. While this is not necessarily a realistic scenario, as infrastructure projetcs will be implemented, this No Build scenario provides a snapshot of how growth could impact the county if nothing were to be done and identifies where the needs might be the greatest.

Table IV-3 presents forecast 2040 No Build systemwide statistics with a comparison to base year 2012 performance. The comparisons show a significant degradation in performance, particularly with respect to delay and average facility speeds. Freeway speeds are forecast to deteriorate by over 15% from current levels. Drivers are forecast to experience an increase in delay of over 200%.

Figure IV-4 presents a comparison of daily traffic volume growth between existing and 2040 No Build conditions. The width of the band is proportional to the growth in volume. As would be expected, freeways have the most substantial volume growth, but there are increases on arterials throughout the network.

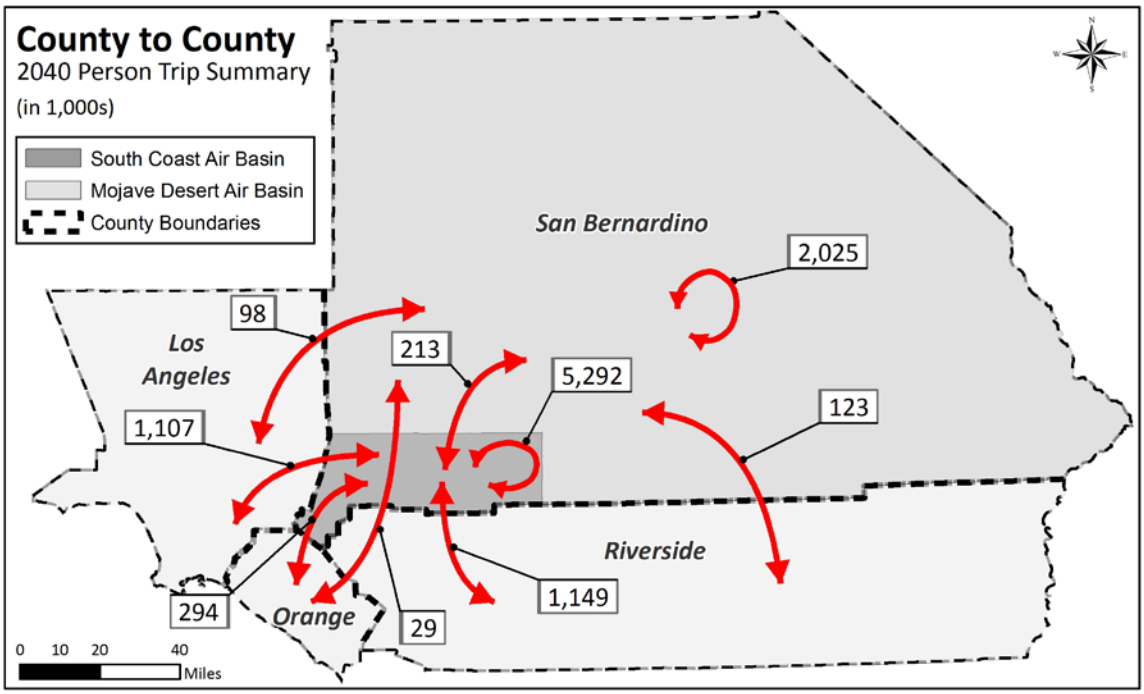
Figure IV-5 and **Figure IV-6** present A.M. and P.M. peak period congestion, respectively, in 2040 due to the growth in population and employment throughout the county. As depicted in **Figure IV-5** and **Figure IV-6** growth is anticipated to strain the efficiency of most freeways, absent capacity enhancements or other improvements to manage traffic demand or operations. The figures highlight the need for local and regional improvements to serve future transportation demands.

Table IV-2: Forecast 2040 County to County Person Trip Growth

County	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Total
2012							
Imperial	456,319	1,478	591	6,428	1,759	146	466,720
Los Angeles	4,809	31,248,637	1,068,155	114,284	459,320	328,511	33,223,715
Orange	1,761	1,058,990	9,770,095	107,584	104,355	17,240	11,060,024
Riverside	15,966	231,067	245,424	5,612,207	475,334	9,592	6,589,589
San Bernardino	4,690	566,391	181,417	394,392	5,267,053	12,220	6,426,162
Ventura	803	374,406	19,790	5,088	12,729	2,353,590	2,766,407
Total	484,347	33,480,968	11,285,471	6,239,982	6,320,550	2,721,299	60,532,616
2040 No Build							
Imperial	837,149	3,382	1,108	20,646	2,900	261	865,446
Los Angeles	2,589	36,058,397	1,155,061	106,296	483,351	314,940	38,120,634
Orange	854	1,109,540	10,886,996	89,821	89,686	13,808	12,190,706
Riverside	24,038	364,302	403,182	9,121,849	680,593	13,394	10,607,359
San Bernardino	4,728	721,042	233,439	590,360	7,529,680	13,558	9,092,807
Ventura	540	498,503	26,781	5,518	13,527	2,786,240	3,331,108
Total	869,899	38,755,166	12,706,566	9,934,489	8,799,737	3,142,202	74,208,059
Difference							
Imperial	380,830	1,904	517	14,218	1,141	115	398,726
Los Angeles	-2,220	4,809,760	86,906	-7,988	24,031	-13,571	4,896,919
Orange	-907	50,550	1,116,901	-17,763	-14,669	-3,432	1,130,682
Riverside	8,072	133,235	157,758	3,509,642	205,259	3,802	4,017,770
San Bernardino	38	154,651	52,022	195,968	2,262,627	1,338	2,666,645
Ventura	-263	124,097	6,991	430	798	432,650	564,701
Total	385,552	5,274,198	1,421,095	3,694,507	2,479,187	420,903	13,675,443
% Difference							
Imperial	83.5%	128.8%	87.5%	221.2%	64.9%	78.9%	85.4%
Los Angeles	-46.2%	15.4%	8.1%	-7.0%	5.2%	-4.1%	14.7%
Orange	-51.5%	4.8%	11.4%	-16.5%	-14.1%	-19.9%	10.2%
Riverside	50.6%	57.7%	64.3%	62.5%	43.2%	39.6%	61.0%
San Bernardino	0.8%	27.3%	28.7%	49.7%	43.0%	10.9%	41.5%
Ventura	-32.7%	33.1%	35.3%	8.4%	6.3%	18.4%	20.4%
Total	79.6%	15.8%	12.6%	59.2%	39.2%	15.5%	22.6%

Source: SBTAM

Figure IV-3: San Bernardino County Person Trip Distribution

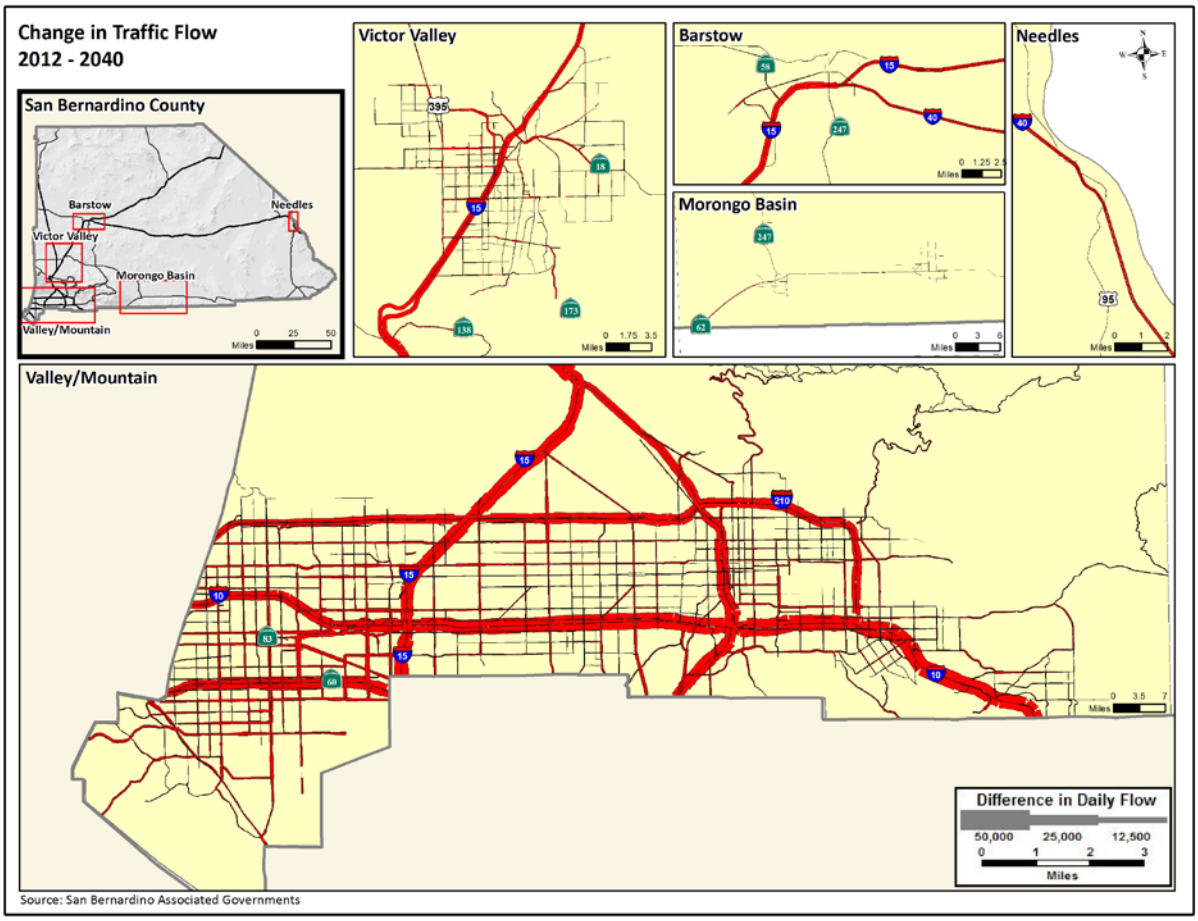


Source: SBTAM

Table IV-3: Forecast 2040 San Bernardino County Performance Statistics

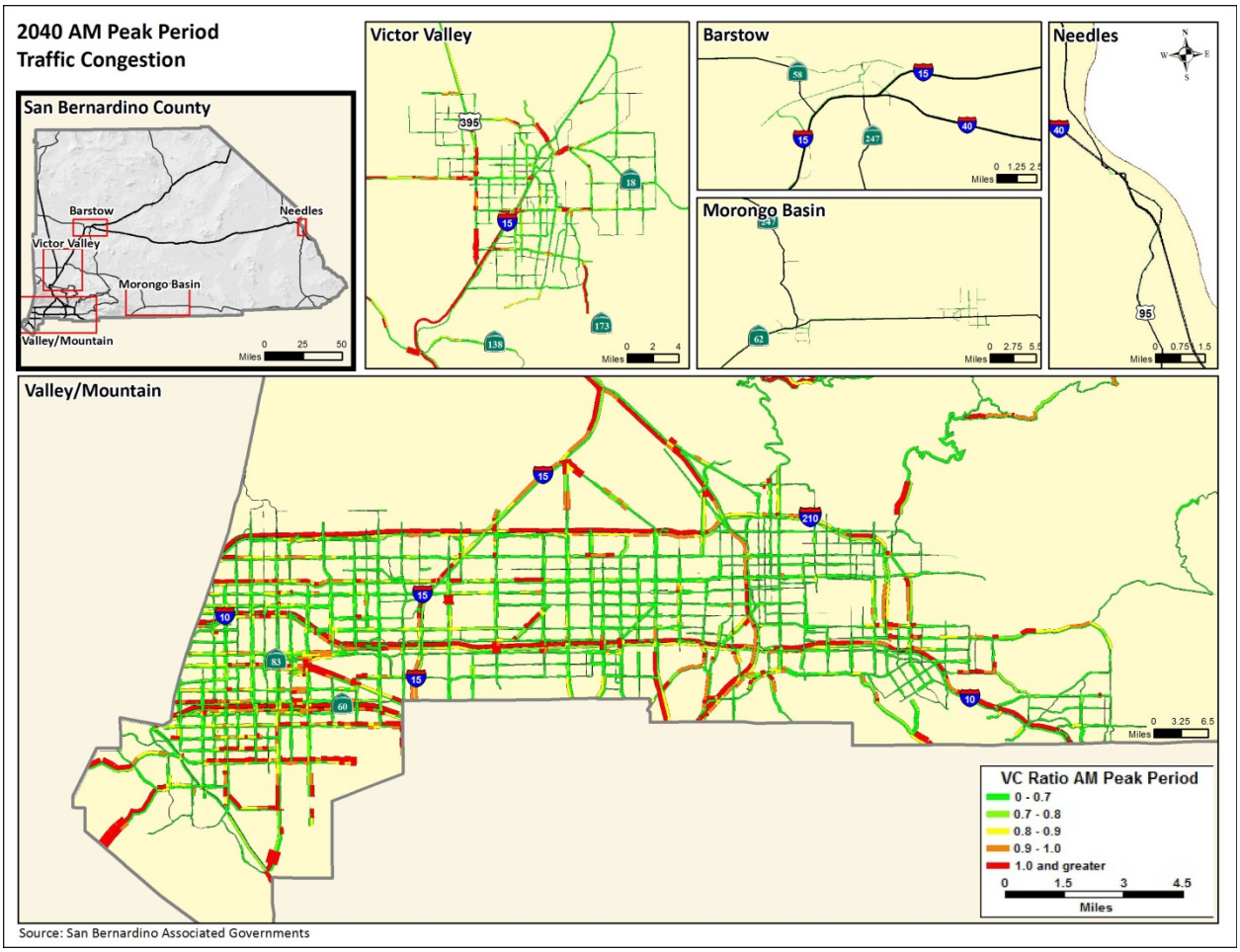
Facility Type	Vehicle Miles Traveled	Vehicle Hours Traveled	Vehicle Hours of Delay	Average Speed
2012				
Freeways	36,660,567	639,479	68,112	57.3
Principal Arterial	7,888,090	221,647	41,084	35.6
Minor Arterial	8,108,461	226,534	23,336	35.8
Collector	3,805,711	115,763	8,450	32.9
Total	56,462,829	1,203,423	140,982	46.9
2040 No Build				
Freeways	50,402,741	1,043,912	260,584	48.3
Principal Arterial	11,181,247	362,562	106,409	30.8
Minor Arterial	12,865,940	398,300	73,156	32.3
Collector	6,672,082	224,469	36,080	29.7
Total	81,122,010	2,029,243	476,229	40.0
Difference				
Freeways	13,742,174	404,433	192,472	-9.0
Principal Arterial	3,293,157	140,915	65,325	-4.7
Minor Arterial	4,757,479	171,766	49,820	-3.5
Collector	2,866,371	108,706	27,630	-3.2
Total	24,659,181	825,820	335,247	-6.9
% Difference				
Freeways	37.5%	63.2%	282.6%	-15.8%
Principal Arterial	41.7%	63.6%	159.0%	-13.3%
Minor Arterial	58.7%	75.8%	213.5%	-9.8%
Collector	75.3%	93.9%	327.0%	-9.6%
Total	43.7%	68.6%	237.8%	-14.8%

Figure IV-4: Daily Traffic Volume Growth 2012-2040



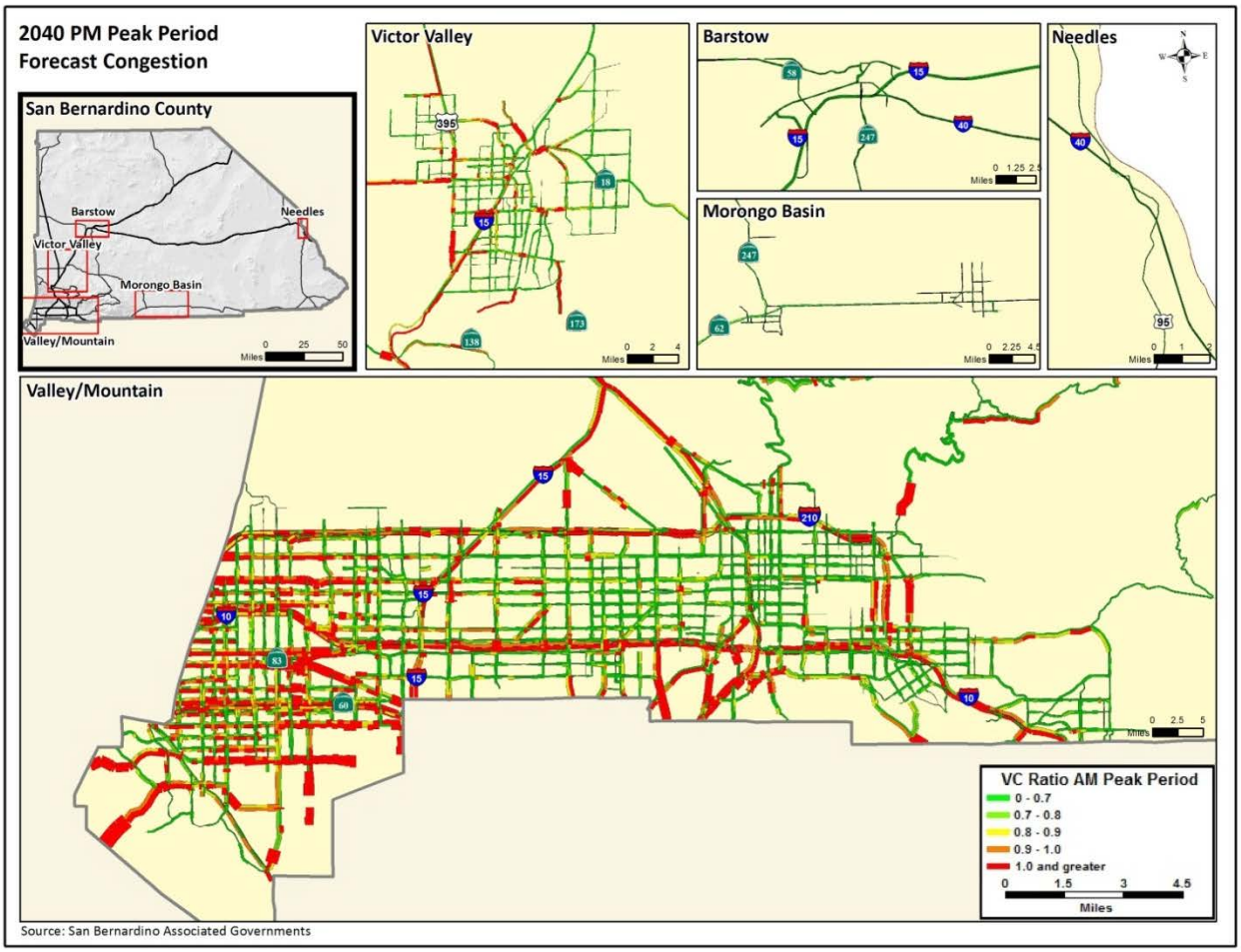
Source: SBTAM

Figure IV-5: AM Peak Period Forecast 2040 No Build Congestion



Source: SBTAM

Figure IV-6: PM Peak Period Forecast 2040 No Build Congestion



Source: SBTAM

V. Transportation Investments

Future investment strategies are anchored upon the commitments made to San Bernardino County voters with the reauthorization of Measure I. The near term investments are defined in the Ten-Year Delivery Plan while the Measure I Expenditure Plan provides a roadmap to investment for larger highway, arterial and transit projects over the life of Measure I. The Countywide Transportation Plan provides an additional level of detail to the Expenditure Plan, indicating projects that can be funded through the 2040 horizon year given current funding forecasts. However, funding commitments to specific projects are made by the SANBAG Board of Directors on a case-by-case basis as those individual projects are developed.

Figure V-1: Mobility Pyramid

The Mobility Pyramid

The transportation planning process is structured around the mobility pyramid (refer to **Figure V-1**) referenced as a foundation of the the RTP/SCS. SANBAG promotes an integrated approach to maximize the efficiency of the existing transportation system. It is a multi-modal approach involving the expansion of highway, arterial, transit and rail capacity and managing the system well, to provide a high degree of mobility for county residents, businesses, workers and visitors.

Following the mobility pyramid from bottom to top, SANBAG regularly monitors key facilities and systems, in partnership with Caltrans, local jurisdictions and transit agencies. This could involve identifying transportation bottlenecks, a need for transit service improvements, or geographic areas in need of further study and evaluation. Maintaining and preserving the existing infrastructure is fundamental to good stewardship of the investments made in highway and transit system capacity. This is the responsibility of the highway/system owners, Caltrans for state highways, local jurisdictions for arterial streets, and transit agencies for their vehicles and rail lines. Although SANBAG is not currently an owner/operator, the agency provides substantial funding to operations and maintenance through Measure I, state and federal funding.

Although local jurisdictions retain land use authority, SANBAG coordinates with the jurisdictions and SCAG to encourage

transit-supportive land use planning where possible. SCAG's growth visioning efforts have sought to integrate land use and transportation planning in response to the requirements of SB 375. Strategies have been developed to support SCS goals and objectives, such as promoting jobs/housing balance, implementing strategies to encourage walking, biking and transit use. SANBAG continues to support demand management through its vanpool and rideshare programs, maintenance of a traveler information system (IE511), development of a Non-Motorized Transportation Plan and continued study to extend the reach of transit service and make it more efficient. In addition, SANBAG has invested significantly in traffic signal synchronization in an effort to reduce arterial travel times and associated vehicle-generated air pollutants.

The final components included in the mobility pyramid include operational improvements and system completion and expansion. Over the past few decades, local jurisdictions, transit agencies, Caltrans and SANBAG have made great strides in expanding our transportation infrastructure and maximizing operational efficiencies. As intelligent transportation systems emerge to maximize efficient system operations, they will be evaluated and implemented where feasible. While progress has been made, more needs to be done to improve the transportation infrastructure for a growing population.

Based on the available funding identified in Section III, two scenarios have been identified for analysis in the CTP.

- Baseline Scenario – Financially constrained scenario which could be funded assuming traditionally available revenue sources through the CTP horizon year of 2040.
- Aggressive Scenario – All projects in the Baseline Scenario plus additional projects deemed necessary to support future transportation system demands. These assumptions are consistent with the SCAG RTP/SCS, which has been determined by the Federal Highway Administration (FHWA) to include "reasonably available funding sources" and is thus viewed to qualify as a financially constrained RTP/SCS.

It should be noted that the SANBAG definition of financial constraint in the CTP Baseline Scenario varies from the definition of financial constraint in the SCAG RTP/SCS. The Baseline Scenario is a more conservative view of the funding that may be available, which is important for SANBAG's own planning. The SCAG RTP/SCS includes "innovative funding sources" that are added to the traditionally available sources to fund the full RTP/SCS project list. Both are legitimate definitions of financial constraint, but the Baseline is more conservative than the Aggressive Scenario (i.e. the RTP/SCS scenario).

The Baseline Scenario includes all projects identified in the Measure I 2010-2040 Ten-Year Delivery Plan 2014 Update, plus projects that could be funded with estimates of traditionally available Measure I, DIF, State, and Federal funds after completion of the Delivery Plan. It should be noted that this estimate deals with total available funding and that there may be limitations on where much of the funding can be allocated and what projects might be eligible. The Aggressive Scenario completes certain projects beyond those in the Measure I Expenditure Plan and other projects in the various Measure I programs that cannot be funded with available revenue. For example, traditionally available revenues are not sufficient to build the entire list of Valley interchanges in the SANBAG Nexus Study. A phased approach is being examined to spread available funding across individual ramp improvements for a greater number of interchanges. The Aggressive Scenario includes the completion of the entire Valley Interchange Program.

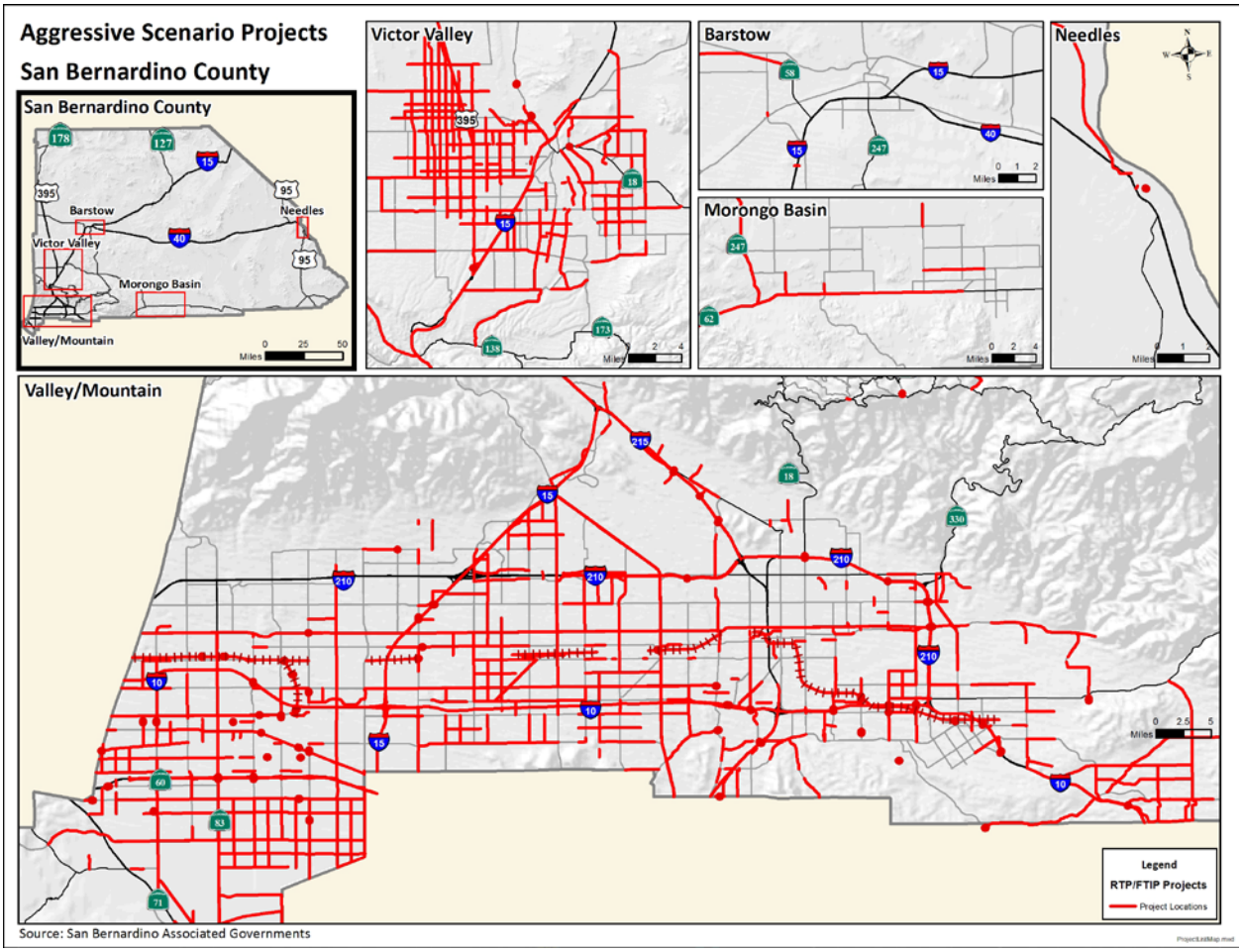
Table V-1 presents the scenario summary including the types of projects assumed for each scenario and the funding sources for each scenario. **Figure V-2** presents a visual representation of all projects included in the Aggressive Scenario.

Table V-1: CTP Scenarios

		Projects	Funding
CTP Scenarios	Baseline	**10-Year Delivery Plan Plus Constrained Projects through 2040:** • Freeway/Interchange Program (10-YDP Projects only) • I-15 Express Lanes to US-395 • I-215 North HOV lane (SR-210 to I-15) • Valley Interchange Phasing Program (constrained to revenue) or Priority 11-18 interchanges (note that priorities are being re-evaluated in 2015) • Arterial Program (constrained to revenue) • No additional grade separations • Redlands Passenger Rail Project • Gold Line to Montclair • Metrolink double track (CP Lilac to CP Rancho) • Metrolink expansion (50 daily trains) • Active Transportation Projects supportable by grants and Transportation Development Act funds • West Valley Connector Express Bus • Foothill/5th Express Bus	**Core Revenues, Financially Constrained Traditional sources:** • Measure I Forecast revenue in 10-YDP • State revenues constrained to gas tax collections • Federal revenues constrained to gas tax collections • Tolls for express lane scenario • Transit revenue adequate to cover current operations held at 3% • Mitigation fees

	Aggressive	**Baseline Projects Plus the Following:**
		• Freeway Improvements
		  o Full Buildout of I-215 from I-10 to SR-60 (including I-215/Washington-Mt Vernon interchange)
		  o I-215 mixed flow lane from SR-210 to I-15
		  o Completion of I-10 to Riverside Co. Line with HOV or Express Lanes
		  o SR-210 HOV lane from I-215 to I-10
		  o I-15 Express Lanes from US-395 to High Desert Corridor
		  o I-10/I-15 Express Lane Connectors
		• Interchange Program Buildout
		• Arterial Program Buildout
		• All Nexus Study Grade Separations
		• Additional Alameda Corridor East Grade Separations
		• Additional rail projects (i.e. Redlands Rail Phase 2)
		• Additional Metrolink double track segments
		• BRT (West Valley Connector, Foothill-5th)
		• Express Bus (Remaining key transit corridors)
		• Non-Motorized Transportation Plan buildout (Secondary Active Transportation Projects)
		• Goods movement projects (truck climbing lanes, Intermodal access improvements)
		• East-West Freight Corridor (regional project)
		• High Desert Corridor (public and/or private funding)
		• Passenger Rail to Ontario Airport
			Match Funding to Infrastructure Need Potential options:
			• Tolls for express lane scenario
			• Supplemental Measure I
			• State and Federal gas taxes indexed to be on par with current authorizations with inflation
			• Regional/State/Federal VMT fee (or equivalent)
			• Aggressive assumptions for State Bonds/Federal Stimulus
			• Prop 1B-type infusion every 10 years
			• Federal freight dollars

Figure V-2: Aggressive Scenario Projects



Highway

The Measure I Expenditure Plan (see http://www.sanbag.ca.gov/planning2/mi_2010-2040/mi_appendices.pdf) includes improvements for six San Bernardino Valley freeway corridors. Revenue for the San Bernardino Valley Freeway Program is projected to be adequate to implement all six projects except for the carpool lane connectors, under the Baseline Scenario. Projects that are not included in the Ten-Year Delivery Plan are not anticipated to be fundable with traditional revenue sources so there long-range projects have been included in the Aggressive Scenario. The following are the key freeway facility assumptions for the Baseline and Aggressive Scenarios:

Baseline

- I-10 widening (Express Lanes from Los Angeles County Line to Ford Street in Ten-Year Delivery Plan)
- I-15 express lanes from Riverside County Line to US 395 (this is greater than the length of I-15 widening in the Expenditure Plan, which is the County line to I-215, widening to I-215 is already included in the Ten-Year Delivery Plan)
- I-215 widening from Riverside County Line to I-10 (completed)
- I-215 HOV lane from SR-210 to I-15

- SR-210 widening from Highland Avenue to I-10 (in Ten-Year Delivery Plan – widening from I-215 to Highland Avenue is not included in the Baseline Scenario)

Aggressive:

- Full buildout of I-215 from I-10 to SR-60 (including I-215/Washington-Mt. Vernon interchange)
- I-215 mixed flow land from SR-210 to I-15
- Completion of I-10 to Riverside County Line with HOV or Express Lanes
- SR-210 HOV lane from I-215 to I-10
- I-10/I-15 Express Lane connectors

Transit

SANBAG has been a partner in the funding and operation of the Metrolink commuter rail system since its inception in 1991. The San Bernardino line is the most heavily travelled line on the Metrolink system and operates 38 trains per day, including both inbound and outbound, from San Bernardino to Los Angeles. Metrolink will be operational to a new downtown transit center in San Bernardino by 2015. One double-track segment on the Metrolink San Bernardino Line is also feasible in the Baseline Scenario. Ontario has a Metrolink station on the Riverside line, but train frequencies are much lower than on the San Bernardino line, and the stations on that line are more isolated.

SANBAG also has a commitment of Measure I dollars in the Ten-Year Delivery Plan to the initiation of rail service to Redlands by 2020 and to SANBAG's portion of the extension of the Gold Line to Montclair, dependent upon the funding of the extension from Azusa in Los Angeles County. Further, 2% of Valley Measure I funds are devoted to Bus Rapid Transit (BRT) which rises to at least 5% in 2020. The E Street BRT line initiated revenue service in April 2014. Other potential BRT corridors have been identified for implementation, but further development of these corridors as full BRT operations has been put on hold due to capital and operating dollar limitations. However, the following are assumed for the Baseline and Aggressive Scenarios for the Valley (Refer to **Figure V-3** and **Figure V-4**):

Baseline

- West Valley Connector as express bus
- Foothill/5th Corridor as express bus
- Express bus-on-freeway routes in the I-10 corridor

Aggressive:

- West Valley Connector as full BRT
- Foothill/5th Corridor as full BRT
- Other corridors as express bus (refer to **Figure V-3**)

Expansion/adjustment of local transit service is assumed according to the Short Range Transit Plans of each transit agency in the Valley and Mountain/Desert. **Figure II-9** presented the existing bus transit network for San Bernardino County. **Figure II-15** presented the regional rail network, both existing and planned, including Metrolink and planned Redlands Rail in San Bernardino County.

The SCAG 2012-2035 RTP/SCS places substantial emphasis on existing and future transit corridors, and assumes that nodes of activity will develop, to varying degrees, at station areas. SANBAG, Metrolink and transit agencies need to coordinate the expansion and operation of the rail and bus network so that it is truly interconnected, coordinated and, to the extent possible, seamless.

In 2010 SANBAG developed a Long Range Transit Plan (LRTP) to address existing and future transit system needs. The LRTP provides a system of transit facilities and services that can increase transit's role in the future. Given the large and diverse nature of the county, the plan is split geographically into three areas: San Bernardino Valley; Victor Valley; and rural areas. This CTP reflects updates to transit planning by SANBAG and its partner agencies.

It is in the interest of both transit system efficiency and public benefit that land use around transit station areas be optimized in ways that take the most advantage of our investments in rail and bus transit. Generally, costs per passenger decrease and operational subsidies are reduced where activities around the transit station areas generate trips that can take advantage of the mobility the transit system provides. This implies that SANBAG actively collaborate with local jurisdictions on land use strategies that will mutually benefit both the transit systems and community development in station areas.

Figure V-3: Baseline Scenario Transit Projects

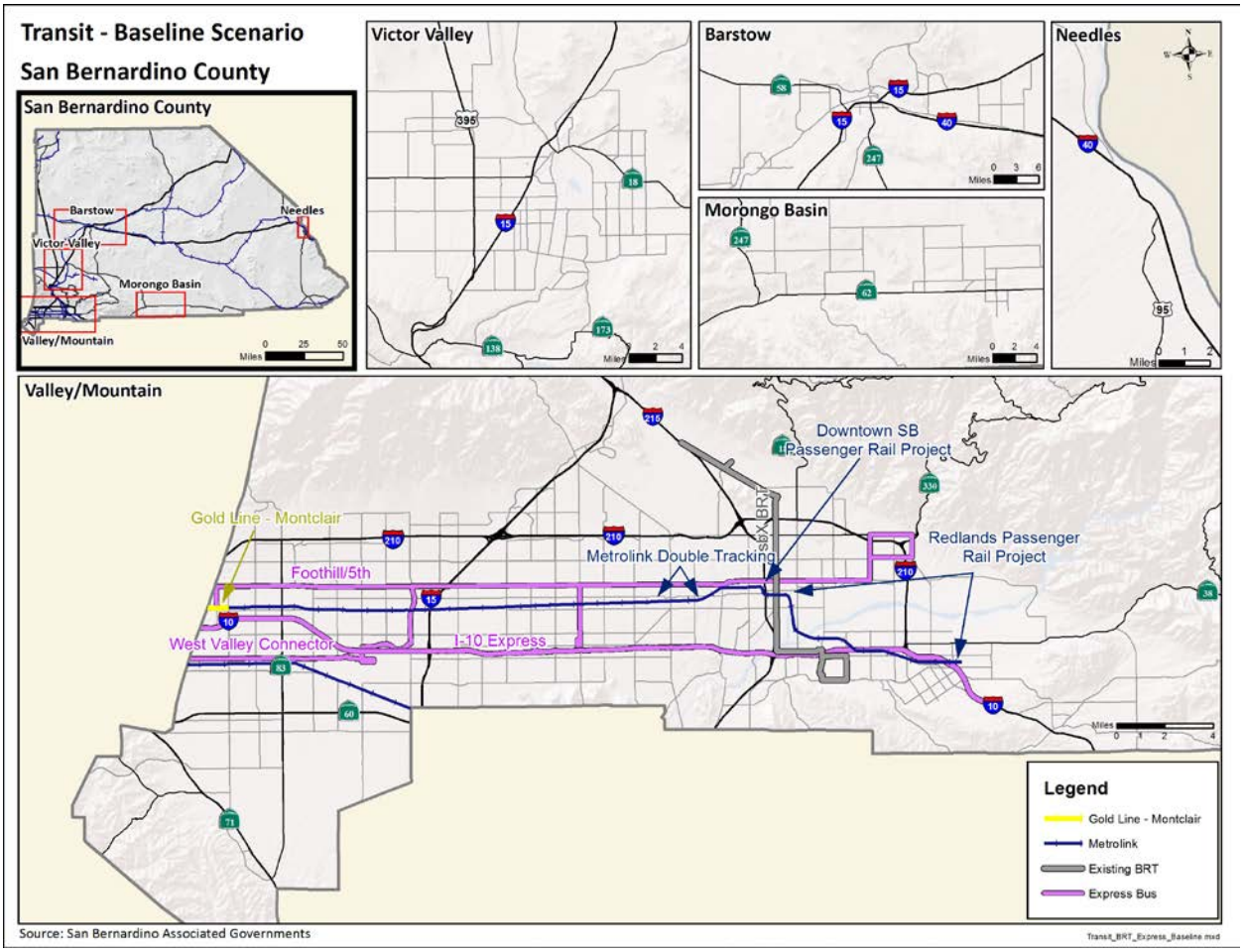
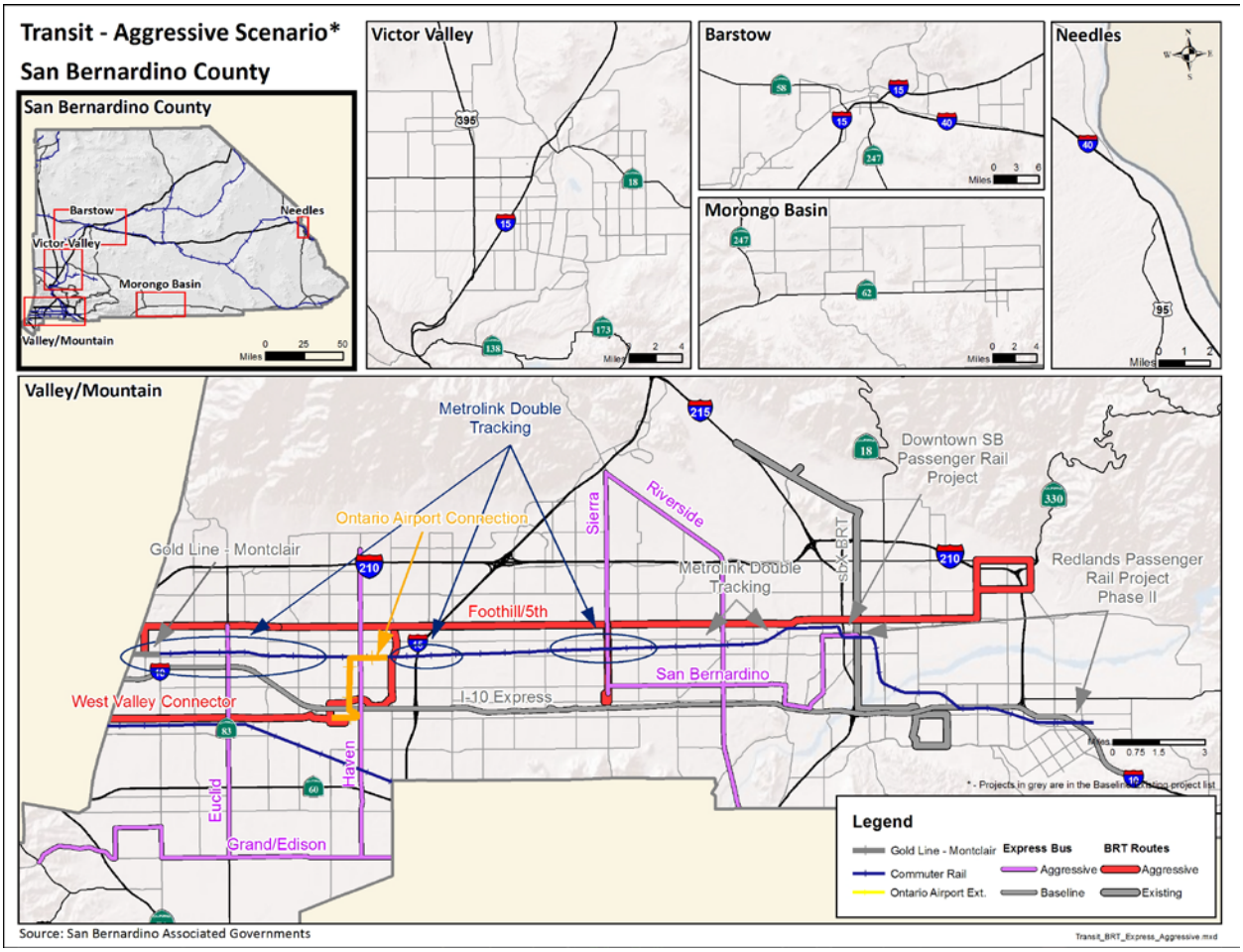


Figure V-4: Aggressive Scenario Transit Projects



SANBAG has already been actively planning with local jurisdictions in the Redlands Rail corridor, even though institution of service is several years away. Further, a land use and economic study of development at station areas on the San Bernardino Metrolink line was initiated in early 2014. Termed the "ARRIVE Corridor" (Advanced Regional Rail Integrated Vision - East), the study is bringing together local jurisdictions, urban planners, economic/real estate development professionals, transit agencies, and other stakeholders to define steps for successful TOD at stations along this corridor. The power of this strategy is that the San Bernardino Metrolink line is already an established, successful service. Enabling transit-supportive development to occur at stations along this line will increase the line's effectiveness, with little additional investment in actual operation. Although many barriers exist to substantial TOD development, the ARRIVE Corridor study is defining strategies to overcome those barriers. Considerations to promote TOD include changes to parking requirements, height limit restrictions, street design/layout, zoning restrictions and building codes.

SANBAG could be more involved in promoting development at transit station nodes through consideration of the following potential options, any of which would require SANBAG Board direction:

- Joint marketing initiative to attract potential TOD developers to the corridor
- Infrastructure funding initiatives to better position transit station areas to attract TOD

- Allowance for reduced development fees for qualifying developments in transit station areas
- Reduced local shares for projects that increase development capacity in transit station areas
- Prioritizing grant funding for transit, pedestrian, and bicycle improvements in transit station areas
- Funding contributions for shuttle services between Metrolink stations and major employers outside the normal walking envelope of the station.
- Partnerships with San Bernardino County employers to provide initial subsidies to employees who take Metrolink to work. Employee surveys may be appropriate to identify employers with the highest potential.
- Free or subsidized Omnitrans fares when transferring between Metrolink and Omnitrans
- Financing assistance for parking lot and garage projects that increase capacity and increase opportunities for TOD.

The Mountain/Desert transit agencies of San Bernardino County operate a combination of local fixed route and demand responsive services in circumstances tailored to their individual settings. The LRTP analyzed a continuation of the existing level of service throughout the life of the plan, and forecasts show sufficient funding over the life of the plan to support these services. However, as noted, the service expansions recommended in the LRTP Vision Alternative are not fully fundable, and as a result, the Baseline CTP Scenario does not include all LRTP recommendations.

CTP Baseline Scenario Performance

Table V-2 presents the performance statistics for San Bernardino County with implementation of the Baseline Scenario. The network improvements incorporated into the Baseline Scenario significantly improve operating characteristics. Vehicle hours travelled is reduced by over seven percent while delay is reduced by over 27 percent. Speeds on all facility types increase.

Figure V-4 and **Figure V-5** present A.M. and P.M. peak period congestion, respectively, under 2040 Baseline Scenario conditions. As depicted in **Figure V-4** and **Figure V-5**, while growth strains the efficiency of many facilities throughout the county, highway and transit projects improve conditions significantly as compared to 2040 No Build conditions (refer to **Figure IV-5** and **Figure IV-6**). Specifically, arterial performance improves significantly with implementation of many local projects through the subarea Major Street and Major Local Highway programs.

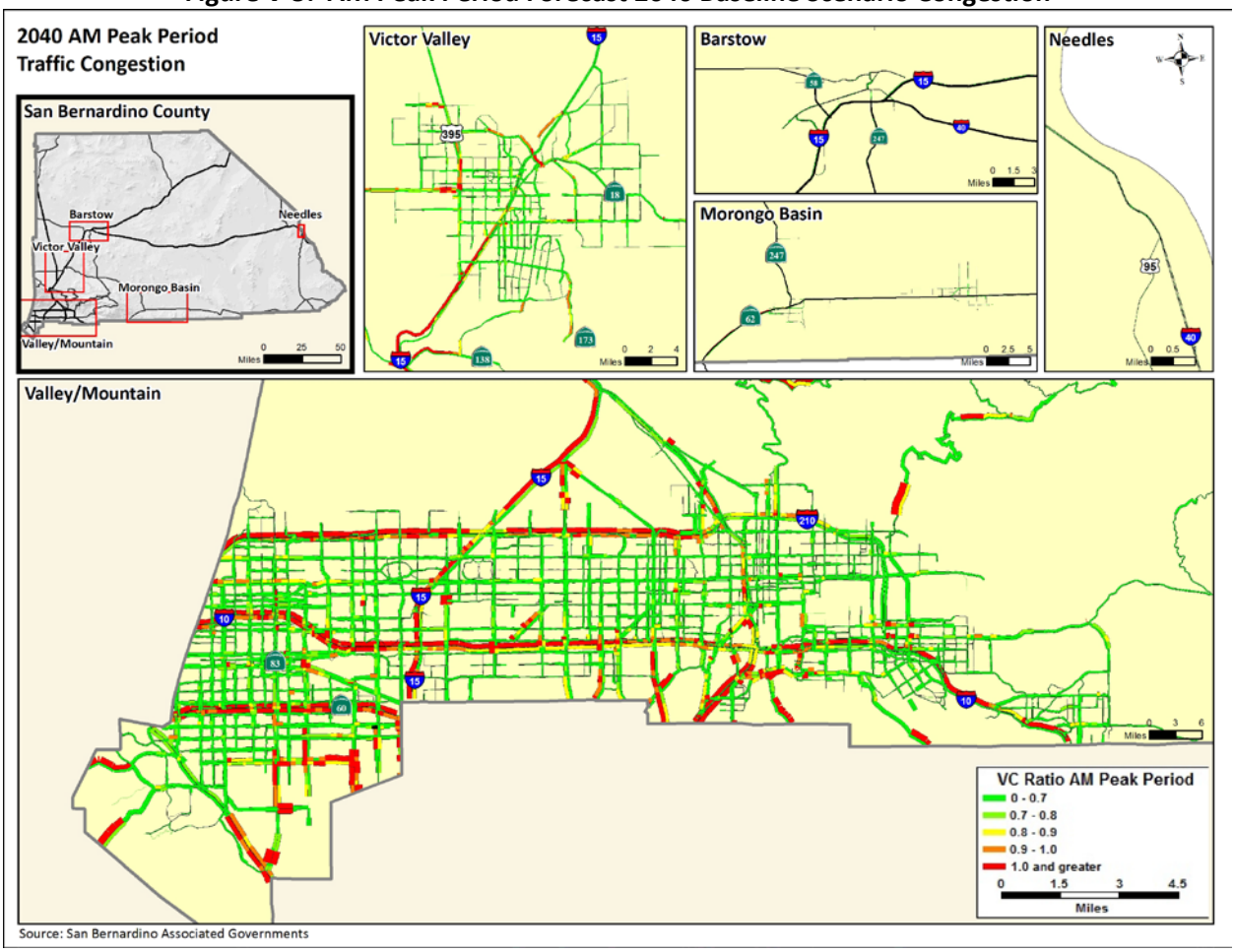
The analysis of congestion levels highlights the need for further local and regional improvements to serve future transportation demands. While over $8 billion dollars in State, Federal, Measure I and developer funds will be expended to implement the Baseline Scenario, additional funds are necessary to implement projects as evidenced by the forecast congestion in **Figure V-2** and **Figure V-4** on local and regional facilities throughout the county.

Table V-2: Forecast 2040 San Bernardino County Baseline Scenario Performance Statistics

Facility Type	Vehicle Miles Traveled	Vehicle Hours Traveled	Vehicle Hours of Delay	Average Speed
2012				
Freeways	36,660,567	639,479	68,112	57.3
Principal Arterial	7,888,090	221,647	41,084	35.6
Minor Arterial	8,108,461	226,534	23,336	35.8
Collector	3,805,711	115,763	8,450	32.9
Total	56,462,829	1,203,423	140,982	46.9
2040 No Build				
Freeways	50,402,741	1,043,912	260,584	48.3
Principal Arterial	11,181,247	362,562	106,409	30.8
Minor Arterial	12,865,940	398,300	73,156	32.3
Collector	6,672,082	224,469	36,080	29.7
Total	81,122,010	2,029,243	476,229	40.0
Difference from 2012				
Freeways	13,742,174	404,433	192,472	-9.0
Principal Arterial	3,293,157	140,915	65,325	-4.7
Minor Arterial	4,757,479	171,766	49,820	-3.5
Collector	2,866,371	108,706	27,630	-3.2
Total	24,659,181	825,820	335,247	-6.9
% Difference from 2012				
Freeways	37.5%	63.2%	282.6%	-15.8%
Principal Arterial	41.7%	63.6%	159.0%	-13.3%
Minor Arterial	58.7%	75.8%	213.5%	-9.8%
Collector	75.3%	93.9%	327.0%	-9.6%
Total	43.7%	68.6%	237.8%	-14.8%
2040 Baseline				
Freeways	52,202,977	1,022,315	209,168	51.1
Principal Arterial	11,449,828	322,405	67,851	35.5
Minor Arterial	13,478,079	392,852	56,091	34.3
Collector	5,531,693	169,658	16,785	32.6
Total	82,662,578	1,907,230	349,896	43.3
Difference from 2040 No Build				
Freeways	1,800,236	-21,597	-51,416	2.8
Principal Arterial	268,581	-40,157	-38,558	4.7
Minor Arterial	612,139	-5,448	-17,065	2.0
Collector	-1,140,389	-54,811	-19,295	2.9
Total	1,540,568	-122,013	-126,333	3.3
% Difference from 2040 No Build				
Freeways	3.6%	-2.1%	-19.7%	5.7%
Principal Arterial	2.4%	-11.1%	-36.2%	15.3%
Minor Arterial	4.8%	-1.4%	-23.3%	6.2%
Collector	-17.1%	-24.4%	-53.5%	9.8%
Total	1.9%	-6.0%	-26.5%	8.4%

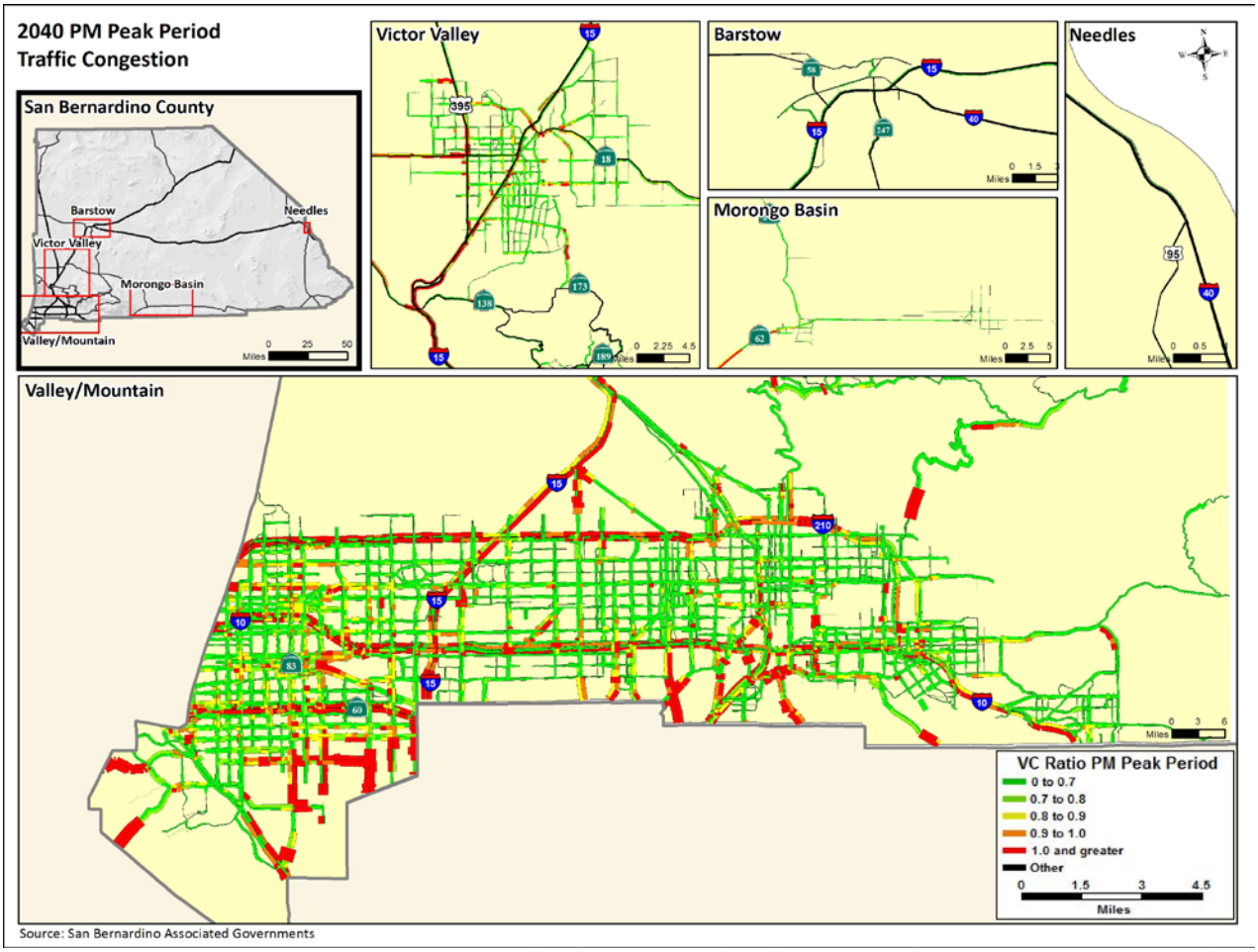
Source: SBTAM

Figure V-5: AM Peak Period Forecast 2040 Baseline Scenario Congestion



Source: SBTAM

Figure V-6: PM Peak Period Forecast 2040 Baseline Scenario Congestion



Source: SBTAM

CTP Aggressive Scenario Performance

Table V-3 presents the performance statistics for San Bernardino County with implementation of the Baseline Scenario. The network improvements incorporated into the Baseline Scenario significantly improve operating characteristics. Vehicle hours travelled is reduced by over six percent while delay is reduced by over 25 percent. Speeds on all facility types increase.

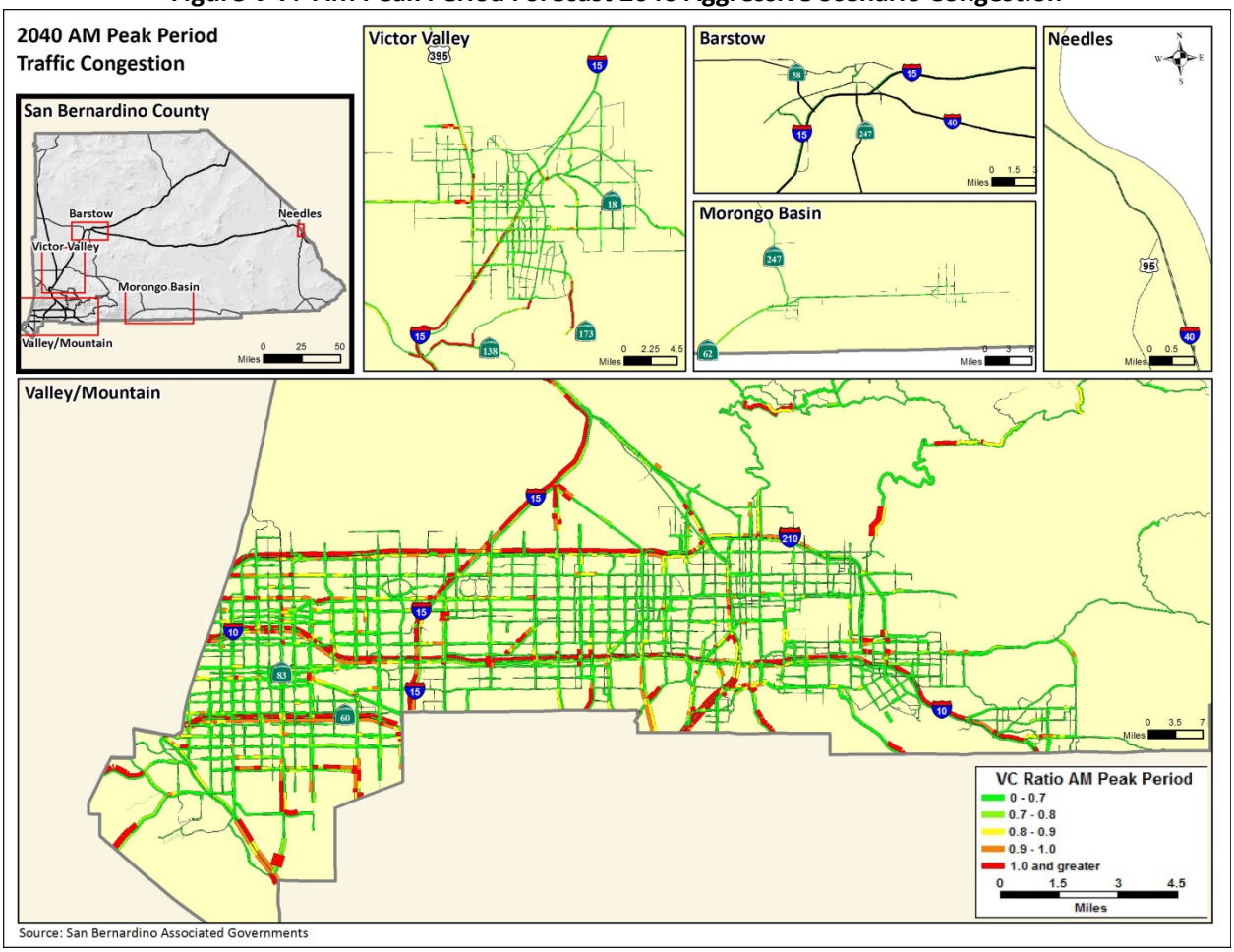
Figure V-6 and **Figure V-7** present A.M. and P.M. peak period congestion, respectively, under 2040 Aggressive Scenario conditions. As depicted in **Figure V-6** and **Figure V-7**, while growth strains the efficiency of many facilities throughout the county, highway and transit projects improve conditions significantly as compared to 2040 No Build conditions (refer to **Figure IV-5** and **Figure IV-6**). Specifically, arterial performance improves significantly with implementation of many local projects through the subarea Major Street and Major Local Highway programs. In addition, conditions are improved from 2040 Baseline conditions. Even with all of the improvements from the Baseline and Aggressive scenarios, further improvements are warranted based on the forecast congestion.

Table V-3: Forecast 2040 San Bernardino County Aggressive Scenario Performance Statistics

Facility Type	Vehicle Miles Traveled	Vehicle Hours Traveled	Vehicle Hours of Delay	Average Speed
2040 No Build				
Freeways	50,402,741	1,043,912	260,584	48.3
Principal Arterial	11,181,247	362,562	106,409	30.8
Minor Arterial	12,865,940	398,300	73,156	32.3
Collector	6,672,082	224,469	36,080	29.7
Total	81,122,010	2,029,243	476,229	40.0
2040 Baseline				
Freeways	52,202,977	1,022,315	209,168	51.1
Principal Arterial	11,449,828	322,405	67,851	35.5
Minor Arterial	13,478,079	392,852	56,091	34.3
Collector	5,531,693	169,658	16,785	32.6
Total	82,662,578	1,907,230	349,896	43.3
Difference from 2040 No Build				
Freeways	1,800,236	-21,597	-51,416	2.8
Principal Arterial	268,581	-40,157	-38,558	4.7
Minor Arterial	612,139	-5,448	-17,065	2.0
Collector	-1,140,389	-54,811	-19,295	2.9
Total	1,540,568	-122,013	-126,333	3.3
% Difference from 2040 No Build				
Freeways	3.6%	-2.1%	-19.7%	5.7%
Principal Arterial	2.4%	-11.1%	-36.2%	15.3%
Minor Arterial	4.8%	-1.4%	-23.3%	6.2%
Collector	-17.1%	-24.4%	-53.5%	9.8%
Total	1.9%	-6.0%	-26.5%	8.4%
2040 Aggressive				
Freeways	52,767,575	1,031,886	210,773	51.1
Principal Arterial	11,520,670	312,068	30,991	36.9
Minor Arterial	13,185,233	377,662	25,502	34.9
Collector	5,471,648	165,287	7,171	33.1
Total	82,945,126	1,886,904	274,436	44.0
Difference from 2040 No Build				
Freeways	2,364,834	-12,026	-49,811	2.8
Principal Arterial	339,423	-50,494	-75,418	6.1
Minor Arterial	319,293	-20,638	-47,654	2.6
Collector	-1,200,434	-59,182	-28,909	3.4
Total	1,823,116	-142,339	-201,793	4.0
% Difference from 2040 No Build				
Freeways	4.7%	-1.2%	-19.1%	5.9%
Principal Arterial	3.0%	-13.9%	-70.9%	19.9%
Minor Arterial	2.5%	-5.2%	-65.1%	8.1%
Collector	-18.0%	-26.4%	-80.1%	11.5%
Total	2.2%	-7.0%	-42.4%	9.9%

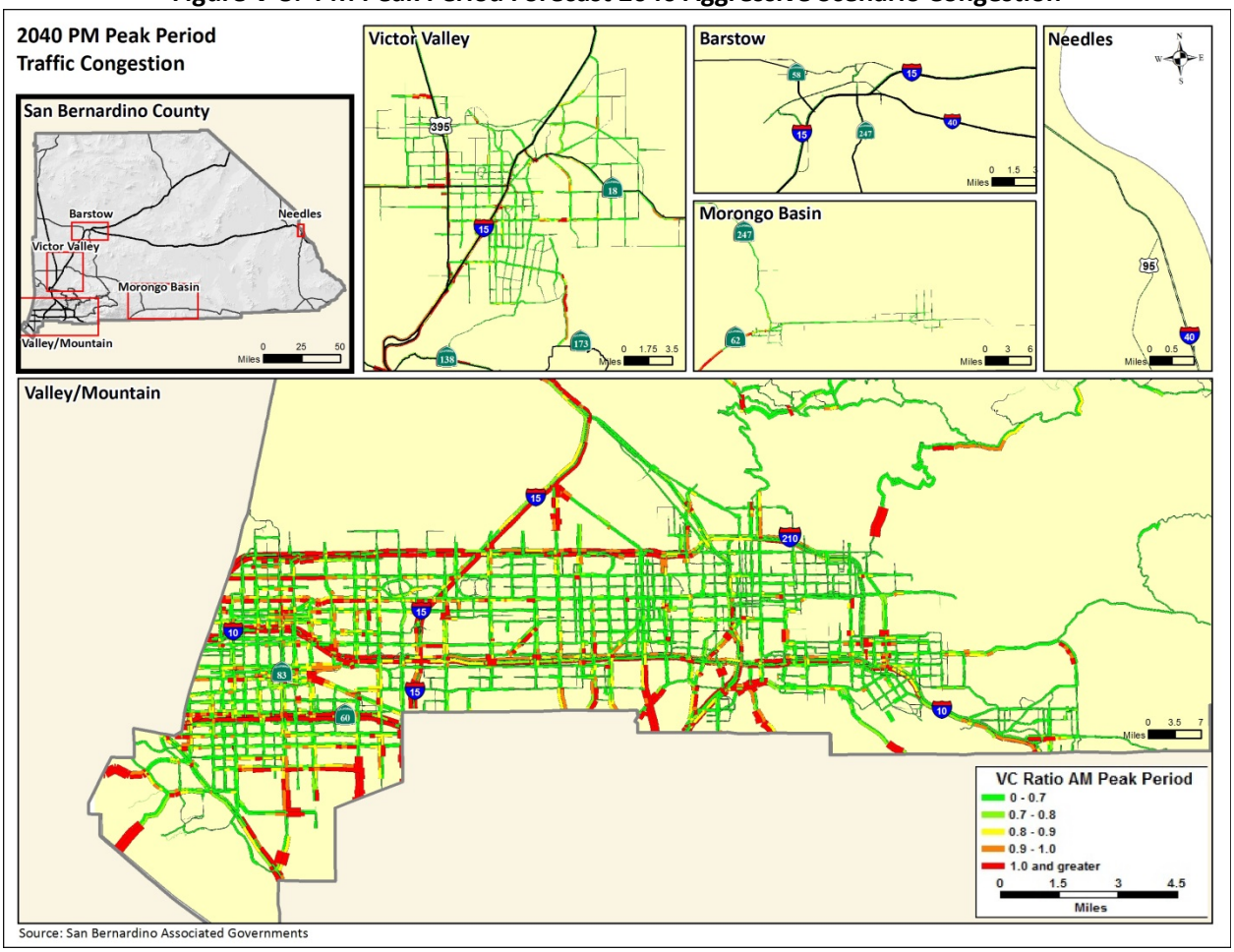
Source: SBTAM

Figure V-7: AM Peak Period Forecast 2040 Aggressive Scenario Congestion



Source: SBTAM

Figure V-8: PM Peak Period Forecast 2040 Aggressive Scenario Congestion



Source: SBTAM

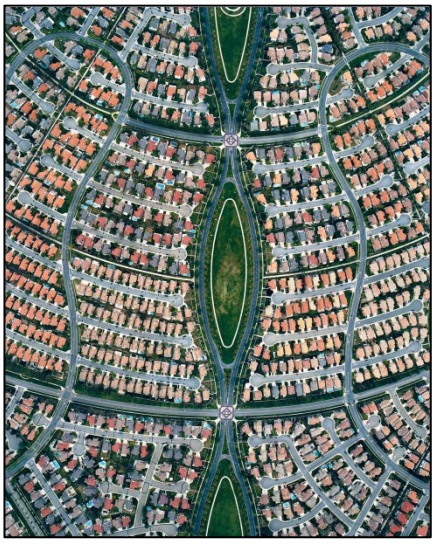
Airports

While regional air passenger travel declined during the recession, growth is picking up as the economy improves. Ontario International Airport (ONT) has experienced a decline in air travel for a variety of reasons. Some of the local air service has shifted to Los Angeles International Airport. The City of Ontario is continuing its quest to regain local control of ONT from the Los Angeles World Airports (LAWA). Benefits to local control include increased options for air service, greater convenience for local residents and economic benefits for businesses and local governments in San Bernardino County. Forecast 2035 airport demand for ONT ranges from 19.2 to 31.6 million annual air passengers per the 2012 RTP/SCS. The Southern California Logistics Airport (SCLA) 2035 forecast ranges from 0.4 to 1.6 million annual air passengers, and the forecast for San Bernardino International Airport (SBIA) ranges from 1.8 to 6.7 million annual air passengers. Cargo service at these three airports is expected to be over 1.3 million annual tons at ONT, approximately 68,000 tons at SCLA and 146,000 tons at SBIA. The forecasts will be updated to 2040 as part of the 2016 RTP/SCS and initial indications are that the forecasts will be lower.

Future airport investment strategies will be greatly enhanced by local control of ONT and expansion of highway and transit connectivity to ONT. In addition, initiatives should be taken to grow passenger and cargo activity at SCLA and SBIA as those opportunities are presented.

Goods Movement/Freight

SANBAG developed and adopted a Goods Movement/Freight Strategy in 2014. The following were recommended as priorities or initiatives that SANBAG could pursue in the context of the agency's role as transportation authority, county transportation commission, and council of governments with respect to goods movement/freight.



- Infrastructure - Continue to build the highway infrastructure needed to support efficient freight movement. An effective supply chain consists of many parts, one of which involves building and maintaining the infrastructure. Cost-effective transportation system upgrades improve productivity and competitiveness. Continued expansion is needed for freeway mainlines, freight-serving freeway interchanges, and rail/highway grade separations.
- Land Use Planning - Encourage proper planning by local jurisdictions at the interfaces of residential areas with warehouse/distribution areas through wise land use decisions, buffering, and effective truck routing. Improper planning leads to later problems for all concerned. Buffers must also be considered for residential uses that are near sensitive air-

quality receptors such as freeways or rail lines even within transit oriented developments. The logistics sector needs to grow to keep up with demand, but it can still be a good neighbor as it grows.

- Promotion - Promote the merits of San Bernardino County's world-class transportation system by providing information to economic development departments regarding SANBAG, Caltrans, and local jurisdiction investments in infrastructure.

- Economic Development and Air Quality - Work with other regional agencies to structure economic development and air quality initiatives as a "win-win." Advances in air quality are important specifically for public health purposes, but they can only be afforded when the economy is also strong. The region must be careful not to undermine the economic means to solve the air quality problem by trying to impose upon industry requirements they cannot afford. SANBAG should participate in regional conversations on how to strike a balance between maintaining jobs and cleaning the air. The air quality successes of the last several decades have taught us that air quality goals are best achieved through incentivizing adoption of advances in clean vehicles and fuels, not by limiting growth. The great strides in air quality improvement over the last several decades have been made at the same time that regional vehicle miles of travel (VMT) have more than doubled. So too, the logistics sector can still expand to meet the growing needs of commerce while at the same time making substantial progress on the air quality front, by focusing on vehicle and fuels technology.

- Incentives/Grants for Air Quality Improvement - Seek grants and provide information on opportunities for financial assistance to San Bernardino County trucking companies and truck owner/operators in maintaining compliance with air quality requirements.

- Anticipate Future Trends - Technology is changing rapidly, and the ability to adapt to those changes will keep San Bernardino County competitive. For example, trends in automation of warehousing should be monitored to assess their impact on the economic value and local costs of permitted warehouse development. Partnerships with the private sector will become ever more important as the region seeks to keep pace with competition in the global economy.

- Education and Employment - Through the Countywide Vision, improve employment pathways to the logistics industry. This will take guidance from the industries and the primary/secondary educational systems upon which they depend for their labor pool. There are a number of reasons why poverty rates have increased in San Bernardino County, but the logistics industry can be part of the solution as a relatively stable and growing source of jobs with pathways to the middle class.

- Truck Routes - Work with State and local partners to provide greater clarity and local education regarding Surface Transportation Assistance Act (STAA) truck routes and clear national, regional and local truck route maps.

- Funding - With regional, state, and federal partners, seek equitable ways to continue to fund freight-related infrastructure and its maintenance. The

logistics industry has generally indicated that it is willing to pay for cost-effective infrastructure improvements that directly benefit their business.

- Airports - Work with local jurisdiction partners to define policies that will lead to greater use of the three airports in San Bernardino County by freight-related businesses. Continue to support local control of Ontario International Airport.
- Project Readiness - Position SANBAG for state and federal funding opportunities by developing as many freight-related projects as possible through the Project Approval and Environmental Documentation (PA&ED) stage. Include clearance under the National Environmental Policy Act (NEPA) where there are opportunities for substantial federal funds.
- Awareness - Create and maintain greater awareness about goods movement issues affecting San Bernardino County among the SANBAG Board of Directors, state and federal elected and appointed officials, local agency technical staff, and the public.

San Bernardino County has benefitted from its location advantages and world-class transportation system as the logistics sector has grown. Although many opportunities remain, future success is not assured. The Great Recession demonstrated how fragile the Inland Empire economy can be, as San Bernardino County still lags behind the pace of recovery of coastal counties. A critical review of San Bernardino County's freight system was conducted as part of the development of a SANBAG freight strategy in 2014. The review was conducted as a "SWOT analysis" with respect to freight – What Strengths does the County have, what are its Weaknesses, what Opportunities are likely to be available in the future, and what are the Threats to future success? The results are summarized below.

Strengths

- Location advantages as an international gateway
- A world-class highway network and rail for freight mobility
- Presence of logistics and distribution facilities operated by some of the largest corporations in the U.S.
- Proactive local economic development agencies
- A substantial labor force
- Excellent regional partners
- Substantial funding for infrastructure
- A substantial supply of developable land

Weaknesses

- The K-12 educational system is not yet adequately equipping students for some of the jobs the County is capable of attracting.
- Impacts of the logistics sector have not always been managed well - lack of foresight in planning has resulted in trucks passing by or through neighborhoods, with spillover noise, pollution, and impacts on residential communities at the edges of warehousing districts.

- Difficulty competing with coastal communities for the more attractive jobs.
- Land for logistics facility development, though still available, is becoming more scarce.
- The extent of industrial/warehouse/logistics development and the associated trucks, trains, and air quality problems sometimes casts a negative image of San Bernardino County in general.

Opportunities

- International trade is poised to expand further – Despite the Panama Canal expansion and increased competition from other North American ports, forecasts show a near tripling of container volume through the ports in the next 25 years.
- The Inland transportation network is, so far, keeping pace with expansion of the logistics sector.
- Southern California is a stable and growing market for products and services that county businesses can provide.
- If local control of Ontario International Airport is obtained, this area can become an even greater economic engine.
- Over time, it can be expected that the cost advantages of production in eastern Asia will lessen, creating more opportunities for production and manufacturing in North America, including Southern California.

Threats

- State and regional regulation - California is near the bottom of the national list of states in terms of friendliness for business.
- Other states are eager to capture Southern California's logistics jobs.
- Although the region, including the logistics sector, has made enormous strides in cleaning up the air, achievement of National Ambient Air Quality Standards remains a daunting and expensive challenge. Overly aggressive regulatory timelines, though well-intentioned, could undermine the very economy that would enable the necessary air quality investments to occur.

- The supply of affordable land is not inexhaustible.
- Trucks are hard on roadway infrastructure, and with declining revenue streams, funding is projected to fall far short of maintenance needs in the future.
- Automation could lessen the job-creation benefits of portions of the logistics sector.
- Attaining the federal ozone standards is likely to require a complete transformation of our transportation and energy sectors. Based on a joint visioning exercise by ARB, SCAQMD, and San Joaquin Valley Unified APCD, one path to attainment requires a nearly complete transformation of passenger vehicles to zero-emission technologies, approximately 80 percent of the truck fleet

to zero-or near-zero technology, and nearly all locomotives operating in the South Coast Air Basin to be using some form of zero-emission technology. Such dramatic changes will inevitably require huge investment in and fundamental change to the regional transportation and energy infrastructure. It is questionable whether these transformational changes are physically and economically feasible within the timeframes defined by the federal government.

- San Bernardino County welcomes the improvements in air quality that would result from these investments, but is highly concerned that this will undermine the economic growth associated with the logistics industry, which the County desperately needs.

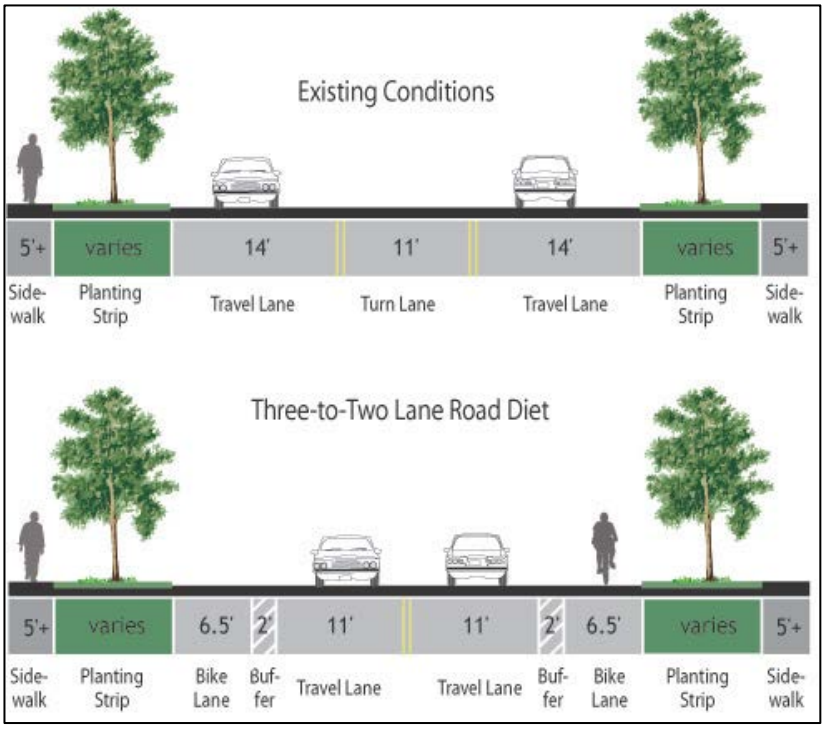
In summary, San Bernardino County and its logistics-driven economy exist in a highly competitive environment. We live within a dynamic world economy with intense competition for the jobs and revenue that are derived from the flow of goods. All the environmental advances we seek cannot be achieved without a strong economy to finance them. SANBAG and its regional agency partners must pursue environmental objectives in ways that do not undermine the economic means to achieve them. At the same time, we must thoughtfully plan for continued expansion of logistics capacity in ways that insulate communities from their impacts. This will require collaboration across multiple disciplines and more comprehensive approaches than in the past.

Active Transportation

Adoption of the 2012-2035 RTP/SCS resulted in a heightened awareness of active transportation. Active transportation includes non-motorized travel and is a key component of the overall strategy to satisfy state mandated GHG reduction targets defined in AB 32 and SB 375. The 2012-2035 RTP/SCS allocated $6.7 billion for active transportation projects throughout the SCAG region. These projects will increase bikeway miles, bring sidewalks into compliance with the Americans with Disabilities Act (ADA), improve first-mile and last-mile connections to transit, improve safety, etc.

SANBAG will continue to incorporate strategies identified in the NMTP to enhance active transportation mobility. Continued support will be provided for the planning and implementation of Safe Routes to School as well as the implementation of complete streets. A coordinated effort is underway to evaluate all modes of travel and integrate active transportation components where appropriate. Specific SANBAG active transportation initiatives include the following:

- Development and Implementation of a Countywide Complete Streets Strategy
- Development of a Countywide Safe Routes to School Strategic Plan



- Monitoring State and Federal funding tools to ensure local jurisdictions have adequate funding to implement active transportation infrastructure
- Collaboration to support SCAG's regional efforts in developing performance measures and monitoring tools for active transportation and public health
- Support public health efforts to reduce asthma incidence, obesity and heart diseases through promotion of active transportation policies and infrastructure

The NMTP continues to be the living document that strategically guides the development and implementation of active transportation infrastructure. The plan includes active transportation projects for each jurisdiction. As many of the funding opportunities for active transportation are grant programs, inclusion of projects into the countywide NMTP is often required for grant funding consideration. In order to keep pace with the development of bicycle and pedestrian infrastructure projects and leverage as much funding for these facilities as possible, the NMTP is and will be amended regularly to ensure it is current with amendment adopted by the SANBAG Board of Directors. A map of existing and future bicycle facilities was previously provided in **Figure II-24**.

The focus now is obtaining funding, including grant funding, to construct improvements identified in the NMTP. SANBAG, in partnership with local jurisdictions and transit agencies, is pursuing all available grant funding, including the new State/Regional Active Transportation Program (ATP), Local Transportation Fund (LTF) Article 3 funds, and potential local use of Measure I funds. SANBAG and the jurisdictions are committed to identifying grant opportunities for bicycle and pedestrian projects wherever they may exist. Pursuit of these grants, in conjunction with local jurisdictions, is a primary strategy for implementing the NMTP.

The San Bernardino County Active Transportation Network (SBCATN), an informal collaboration of public agencies and advocacy groups with an interest in active transportation, has been established to help coordinate and collaborate on bicycle and pedestrian facility planning and implementation. The Network has served as an excellent forum for communication on active transportation and health-related issues related to the built environment. SANBAG will continue to be involved with the activities of this group.

VI. Transportation Strategy

The focus of SANBAG's strategy is the development and maintenance of a sustainable transportation system. The needs of all users and transportation modes must be considered to ensure a balanced system. It is incumbent upon SANBAG to plan, implement and maintain a transportation system that fosters regional and national economic competitiveness and provides for efficient movements of people and goods within, through and to San Bernardino County.

As noted previously, the Measure I 2010-2040 Strategic Plan identified implementation strategies for each individual Measure I program with some elements of the strategies applicable to all Measure I programs throughout the county. The countywide implementation strategies are designed to effectively deliver the transportation projects for which Measure I was approved by the voters. Implementation strategies common to all Measure I programs include:

- Strategy 1: Maximize revenue
- Strategy 2: Control project and program cost
- Strategy 3: Accelerate project delivery through borrowing, where appropriate
- Strategy 4: Remove obstacles to timely project development

There are two parts to SANBAG's transportation strategy: a set of overarching principles, coupled with individual strategies by geographic area, mode, and function. The overarching principles and strategies identified in the CTP build off of the implementation strategies identified in the Strategic Plan (refer to Page III-1 of the Strategic Plan for the implementation strategy discussion).

Overarching Principles

1. **Customer focus** – SANBAG and other public agencies exist to serve their traveling "customers." Customers extend across all auto, transit, truck, and non-motorized modes.
2. **Partnership-building** – SANBAG is part of a multi-agency team to deliver mobility and safety improvements to our customers. Other important parts of the team include Caltrans, transit agencies, local jurisdictions, SCAG, and air quality management districts. Good communication and collaboration is essential for each agency to accomplish its part of the overall mission.
3. **Stewardship** – The public has entrusted resources to SANBAG and other transportation-related agencies. We must be good stewards of both the limited financial resources available and the environmental resources we need to preserve as the system is built.
4. **Cost-effectiveness** – Investments should be made in a way that maximizes the benefits derived from the available resources, with due attention given to geographic equity.
5. **Economic competitiveness** – The transportation system exists to enable the businesses and residents of San Bernardino County to thrive. Our continued investment in transportation efficiency will enhance San Bernardino County as a business location.
6. **Delivering on commitments** – Commitments are made at multiple levels, but major ones include: delivering the range of projects reflected in the Measure I Expenditure Plan; equitably distributing State, federal, and Measure I funding to the county's transit agencies and local jurisdictions; supporting implementation of the San Bernardino Countywide Vision; fulfilling commitments in the Sustainability MOU with SCAG; and supporting other statewide sustainability goals while fostering economic growth.

7. **System preservation** – SANBAG and its agency partners need to work together to estimate maintenance needs and seek the funding needed to preserve/operate capital investment in highways and transit systems.

CTP Key Issues

- Transportation funding
- Congestion relief and economic competitiveness
- System preservation and operations
- Land use
- Transit system interconnectivity
- Attainment of air quality standards
- Sustainability and GHG reduction

CTP Key Strategic Issues

The previous sections have highlighted a number of issues and concerns about transportation and sustainability in San Bernardino County. Summarized below are several of the key strategic issues that will need to be addressed going forward. There are many other issues as well, but these represent key areas where SANBAG should consider taking action or advocating positions. These are followed by a discussion of individual strategies categorized by geography, mode, and functional area.

1. **Transportation funding** – It is well known that State and federal funding levels are not keeping up with operations and maintenance needs and requirements for new or expanded infrastructure. **Figure III-3** presented the decline in purchasing power of the state gas tax in cents per gallon. In the meantime, the population of the Inland Empire increased 63% in the 20 years from 1990 to 2010, a growth rate of 2.5% per year. Local funds now represent over 50% of transportation infrastructure revenue in San Bernardino County.
2. **Congestion relief and economic competitiveness** – Although the statewide emphasis has shifted to sustainability, the need for congestion relief cannot be ignored. We live in a globally competitive environment, in which the speed and cost of doing business still matters a great deal. It is essential that San Bernardino County maintain the transportation advantages that we currently enjoy with our robust freeway and interchange network to support the logistics industry. Some 20% of our jobs are now related to logistics, and logistics hubs will continue to play a major role in bringing business and employment to our area.

3. **System preservation and operations** – The tens of billions of dollars in street and highway infrastructure investment must be preserved. Although Caltrans and local jurisdictions are the owners and operators of our freeways and arterial streets, SANBAG can be a partner with them to ensure that these roadways and structures are maintained and that the operations are optimized. Routine maintenance can avoid the much larger expenditures that will be incurred from neglect. Likewise, the need for operating funds for transit is a major emerging issue and will limit transit network expansion if it is not addressed. Real-time information and technology both play a key role in maximizing system operations and efficiency.
4. **Land use** – SANBAG and local jurisdictions are aggressively promoting transit oriented development (TOD) as part of a strategy for economic growth and for achieving the regional SB 375 targets. An example is the study for the ARRIVE Corridor along the San Bernardino Metrolink line, which is exploring achievable strategies for TOD for each of the six stations along this line in San Bernardino County. The challenge with TOD in San Bernardino County has to do with market readiness. Jurisdictions cannot impose development types and densities that the

market cannot yet afford. The strategy must be one of preparing for TOD, while also being patient and demonstrating commitment to rail/transit infrastructure that will attract TOD developers. Most jurisdictions with rail station assets are ready to support TOD, and some have had recent success, but they may need assistance with infrastructure investment, which was dealt a serious blow with the State's dissolution of redevelopment agencies.

5. **Transit system interconnectivity** – The transit network is growing, both regionally and in the Inland Empire and in terms of both rail and bus. Improved coordination is needed across transit (rail, fixed route bus, and demand responsive) and ridesharing modes (carpool and vanpool) to provide a high level of customer service at an affordable cost. The telecommunications industry reminds us that successful communications is all about the network. The same is true in building the transit and ridesharing system, and we need to think in terms of interconnectivity, not independent systems.
6. **Attainment of air quality standards** – Ozone attainment in the South Coast Air Basin is at a critical juncture. As the Basin gets closer to background ozone concentrations (estimated by SCAQMD at 48 ppb), the path to attainment will require adoption of technologies and fleet turnover rates that are acknowledged by many as not feasible within the timelines prescribed by EPA. We need to push forward on air quality improvements and realize the associated public health benefits, but at a rate that our local economy and industry can absorb, based on technologies that can be cost-effectively incorporated into the marketplace. A balanced approach is needed.
7. **Sustainability and GHG reduction** – SANBAG and our local agency partners have been leaders in regional planning for GHG reduction. The lofty goals of AB 32 and GHG-related Executive Orders now need to be translated into an approach that can achieve those goals without damaging the economy or our region's competitiveness. Recent analysis in the California Transportation Plan has indicated that land use change and expansion of transit services will produce a relatively small portion of the GHG reductions needed. The analysis indicated that radical transformation in vehicle and fuels technology will need to be the primary mechanism to produce the 80% reduction in GHGs from the transportation fleet targeted for 2050 and 40% by 2030. As with attainment for criteria pollutants, GHG reductions need to be approached in a balanced way.

Individual Strategies

Individual strategies can be grouped into three primary categories:

- Geographic
- Modal
- Functional

Table VI-1 offers strategies that address specific challenges associated with each of the categories listed above. Modal categories have been nested into the primary geographic subareas of the Measure I Strategic Plan. The primary challenge or challenges associated with each component are identified, along with corresponding strategies that address the challenges.

Table VI-1: Summary of Long-Term Transportation and Sustainability Strategies

Category	Challenge	Strategy
Valley Categories by Mode		
Freeway system	Forecasts show that the system will be highly congested by 2040. Funding for capacity and operational enhancements to the system is expected to be constrained.	Position the freeway system to adapt to future demands by using a managed lane approach and improved traffic management and information systems across all freeways.
Freeway interchanges	Projected Measure I, state, and federal funds will be insufficient to meet all the interchange improvement needs.	Spread Measure I funds across interchange hot-spots using both a phased approach and right-sizing of full interchange improvements. Look to a future Measure I, state, and federal funds to complete the freeway interchange program.
Rail/highway grade separations	Projected Measure I, state, and federal funds will be insufficient to build all the grade separations identified.	Prioritize additional grade separations and proceed with project development on at least two projects, to take advantage of potential future freight funding opportunities.
Arterials	Arterial project construction has lagged original expectations.	Encourage jurisdictions to accelerate arterial improvement projects and continue policy flexibility for funding development shares. SANBAG will identify arterial improvements that are particularly important to route continuity.
Passenger Rail	Stations along the Metrolink San Bernardino Line and the Redlands Rail corridor are our most significant opportunities for transit oriented development and transit-related economic growth. Funds for rail services are limited, and Metrolink costs are increasing faster than available funding.	To encourage investment, jurisdictions along these corridors need assurances from SANBAG/Metrolink that service can be maintained and, ideally, expanded. Develop a sustainable funding plan, and integrate operations for these corridors wherever possible. Position Metrolink capacity-enhancement projects for future implementation funding.
Gold Line	Timing of extension of Gold Line to Montclair and beyond is uncertain, and issue of overlapping Metrolink/Gold Line/ONT corridors needs to be resolved.	Develop an integrated operational/funding solution for Gold Line and Metrolink in coordination with LA Metro, Metrolink, and local jurisdictions.
Transit Connection to ONT	The City of Ontario is negotiating for the transfer of control of Ontario International Airport to the City. The region would benefit from improved transit access for passengers and employees.	Take a phased approach to transit access to ONT, beginning with shuttle service from the Metrolink Rancho Cucamonga station, with a possible longer term solution emerging from corridor-level analysis.
Bus Rapid Transit (BRT)	The cost of building all the BRT corridors in the Long Range Transit Plan far exceeds available funding. The proper technology solution to carry across future express bus/BRT corridors also needs to be resolved.	Reevaluate the Express Bus/BRT strategic plan to determine how premium transit should be staged and funded across the Valley. The plan should address corridor priorities, phasing, technology, and funding options, providing information for the Board to decide on the appropriate BRT/Arterial funding split by 2020.

Table VI-1: Summary of Long-Term Transportation and Sustainability Strategies, Continued

Category	Challenge	Strategy
Valley Categories by Mode, Continued		
Fixed-route bus service	Sustainable funding for operations is the biggest challenge.	Study the challenges of the trajectory of transit operations funding, and jointly develop solutions between SANBAG and Omnitrans.
Airports	Passenger service has declined significantly at ONT over the past decade, attributed in part to current management policies.	Support Ontario and the region in the effort to regain local control of ONT, and make ONT, SBIA, and SCLA more competitive as destinations for passengers and freight.
Active Transportation	Large funding needs for building out the cycling/walking network	Continue to submit competitive grant applications to support implementation of the Non-motorized Transportation Plan (NMTP). • Maintain and update the NMTP • Identify and pursue grant funding opportunities to expand cycling and walking infrastructure
Demand-responsive bus service	Demand-responsive service is the highest cost form of transit, but important in serving certain senior and disabled transit riders. Under the Americans with Disabilities Act, transit operators are required to provide paratransit service within ¾-mile of fixed routes for passengers with disabilities who cannot ride fixed-route service.	Continue assistance programs, such as helping demand-responsive riders use fixed-route systems and coordination with non-profit entities while also maintaining demand-responsive service.
Transit integration and inter-connectivity	Transit services could be better coordinated across systems in terms of ease of transfers, fare media, and first/last mile connections. This will be even more important as the system grows.	Take a more integrated, customer-focused approach to the provision of transit services. Facilitate seamless ticketing and better connection at existing transit centers and connection points.
Mountain/Desert Strategies		
Victor Valley highway projects	Growth forecasts show a near doubling in traffic volume by 2040.	Prioritize projects that will provide the most cost-effective congestion reduction benefit, designating projects for Major Local Highway funding through the subarea process. Continue to advocate the High Desert Corridor as a P3 project.
Mountain/Desert fixed route transit	Funds are limited for route expansion and adjustment as the Victor Valley grows.	Study the challenges of the trajectory of transit operations funding, and jointly develop solutions between SANBAG and the Mountain/Desert transit agencies.
Mountain/Desert demand-responsive bus service	Demand-responsive service is the highest cost form of transit, but important in serving certain senior and disabled transit riders.	Continue assistance programs, such as helping demand-responsive riders use fixed-route systems and coordination with non-profit entities while also maintaining demand-responsive service.
Mountain Subarea	Though baseline population is small, major congestion occurs on weekends, particularly winter weekends, limiting economic growth.	Conduct a study of bottleneck locations and lower-cost improvements that could reduce weekend congestion levels and prioritize funding for those projects.

Table VI-1: Summary of Long-Term Transportation and Sustainability Strategies, Continued

Category	Challenge	Strategy
Mountain/Desert Strategies, Continued		
Morongo Basin	The Basin is steadily growing, and SR-62 is the only viable transportation route through Yucca Valley and Twentynine Palms.	Implement improvement projects identified through the Morongo Basin Area Transportation Study (MBATS).
North Desert	The North Desert has major highway needs, but limited funding.	Evaluate long-term priorities for project investments in the subarea.
Colorado River	Funds are extremely limited for improvements in this subarea.	Smaller-scale, affordable improvements should be investigated and prioritized by the subarea.
Functional Categories		
Highway Maintenance and Operations	Highways are facing serious future maintenance funding shortfalls. Local jurisdictions are responsible for arterial maintenance while Caltrans is responsible for freeway and state highway maintenance.	Conduct a strategic planning study with Caltrans and regional agencies to assess maintenance/operations funding needs and approaches to managing costs.
Rural Highway Needs	Rural areas require unique maintenance/safety/funding consideration.	Focus on cost effective maintenance and support for funding streams that the County and Caltrans can utilize to maintain these rural highways.
Transit System Maintenance and Operations	Existing transit systems are facing potentially serious future operations funding shortfalls.	Optimize transit operations and identify mechanisms to fund future system operations and expansion.
Air Quality	Although air quality has dramatically improved over the last several decades, attainment of the next set of ozone standards will be extraordinarily challenging and costly.	Work with regional and state agencies and the private sector to meet attainment standards on an achievable timeline that does not adversely impact the economy. Advocate for state/federal investment that facilitates this progress. Focus on market-based mobile source technology improvements and fleet turnover as a win-win approach.
Sustainable Growth	The state's GHG reduction goal of 80% by 2050 is an enormous challenge. If not done carefully, it may undermine the economy to the point where it will be impossible to afford the technology improvements needed to achieve this goal.	Assist state/regional agencies and the private sector in technology research and implementation strategies that are technologically feasible and cost-effective (per AB 32) for San Bernardino County. Implementation should follow the natural course of vehicle life cycles and fleet turnover, to the extent possible.
Habitat Conservation	Habitat conservation currently occurs on a project-by-project basis, generally without a comprehensive approach.	Continue with development of the Habitat Preservation/Conservation Framework as a win-win approach for selected geographic areas.
Freight	Forecasts show freight volume through the ports tripling by 2040, placing extreme demands on the transportation system.	Continue building out the freeway system, interchanges, and grade separations. Work closely with the private sector to understand changes in technology and freight operations and how the transportation system can best accommodate those changes. Construct all the freight projects in the California Freight Mobility Plan to the extent funding allows.

Table VI-1: Summary of Long-Term Transportation and Sustainability Strategies, Continued

Category	Challenge	Strategy
Functional Categories, Continued		
Health	Public health is being integrated into policy frameworks throughout state, regional, and local governments. The challenge in the transportation arena is to determine how to incorporate health considerations into decision-making frameworks.	Continue to build on health partnerships already established. Continue focus on transit mobility and developing the active transportation network to promote cycling and walking.
Transportation revenue	The federal Highway Trust Fund and state gasoline/diesel taxes continue to lose purchasing power, resulting in lower revenues for transportation agencies and local jurisdictions.	Provide input to regional and statewide discussions and pilot projects on the generation of additional revenue for transportation. Construct a set of revenue generation options that can be evaluated by the SANBAG Board, with input from a wide range of stakeholders.

Looking to the Future

As the CTP is a living document, future iterations will incorporate emerging trends and strategies. Technology will continue to play a significant role in maximizing the efficiency of the transportation system and meeting air quality attainment standards and GHG reduction targets. Vehicle technology and fuel technology are key to improving air quality and reducing GHG throughout the region. As natural gas and hydrogen fuel cell technologies continue to gain momentum fueling and vehicle charging infrastructure must keep pace. Major auto manufacturers are developing autonomous vehicles, expecting to bring them to market within the next decade. Vehicle to vehicle communication technology is being developed to improve safety.

As the core transit system throughout the San Bernardino Valley matures, system growth must be supported by transit-oriented development to maximize effectiveness. While local jurisdictions are responsible for land use, growth in population and employment are difficult to forecast and manage efficiently. SANBAG must coordinate closely with local jurisdictions to ensure that transportation system investments efficiently serve the current and future population. Mixed-use developments in transit corridors or adjacent to multi-modal hubs offer travel choice options for pedestrians, cyclists and transit users.

Technology will play a role in the future of transit service through greater application of real-time data to optimize service. Electronic fare collection and fare integration between service agencies/providers have the potential to drastically change how service is provided and how transit service is utilized. Boarding and transfer times are reduced, thereby improving travel time and increasing the attractiveness of transit service to users.

SANBAG will continue to monitor emerging transportation trends, including technology, legislative, regulatory and funding opportunities. Strategies incorporated into the CTP will continually be evaluated and updated as appropriate to ensure the CTP is current and relevant.

VII. Acronym List

AB	Assembly Bill
ACE	Alameda Corridor East
ACT	Association for Commuter Transportation
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AE	Advance Expenditure
AEA	Advance Expenditure Agreement
APTA	American Public Transportation Association
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ARRA	American Recovery and Reinvestment Act
ATMIS	Advanced Transportation Management Information Systems
BAT	Barstow Area Transit
BNSF	Burlington Northern Santa Fe
BRT	Bus Rapid Transit
CAC	Call Answering Center
CALACT	California Association for Coordination Transportation
CALCOG	California Association of Councils of Governments
CALSAFE	California Committee for Service Authorities for Freeway Emergencies
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CHP	California Highway Patrol
CMA	Congestion Management Agency
CMAQ	Congestion Mitigation and Air Quality
CMIA	Corridors Mobility Improvement Account
CMP	Congestion Management Program
CNG	Compressed Natural Gas
COG	Council of Governments
CPNA	Capital Projects Needs Analysis
CSAC	California State Association of Counties
CTA	California Transit Association
CTAA	Community Transportation Association of America
CTSA	Consolidated Transportation Services Agency
CTC	California Transportation Commission
CTC	County Transportation Commission
CTP	California Transportation Plan
CTP	Countywide Transportation Plan
DAAS	Department of Aging and Adult Services
DIF	Development Impact Fee
DMO	Data Management Office
DOT	Department of Transportation
E&H	Elderly and Handicapped
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
ETC	Employee Transportation Coordinator
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration

FRA	Federal Railroad Administration
FSP	Freeway Service Patrol
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GFOA	Government Finance Officers Association
GHG	Greenhouse Gas
GIS	Geographic Information Systems
HERO	Home Energy Renovation Opportunity
HOT	High-Occupancy Toll
HOV	High-Occupancy Vehicle
ICMA	International City/County Management Association
ICTC	Interstate Clean Transportation Corridor
IECS	Inland Empire Commuter Services
IEEP	Inland Empire Economic Partnership
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITOC	Independent Taxpayer Oversight Committee
IIP/ITIP	Interregional Transportation Improvement Program
ITS	Intelligent Transportation Systems
IVDA	Inland Valley Development Agency
JARC	Job Access Reverse Commute
LACMTA	Los Angeles County Metropolitan Transportation Authority
LAIF	Local Agency Investment Fund
LNG	Liquefied Natural Gas
LRTP	Long-Range Transit Plan
LTF	Local Transportation Funds
MAGLEV	Magnetic Levitation
MAP-21	Moving Ahead for Progress in the 21st Century
MARTA	Mountain Area Regional Transportation Authority
MBTA	Morongo Basin Transit Authority
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MDLS	Mountain/Desert Local Street
MDMLH	Mountain/Desert Major Local Highway
MDSDT	Mountain/Desert Senior and Disabled Transit
MIS	Major Investment Study
MLH	Major Local Highway
MOU	Memorandum of Understanding
mph	Miles per hour
MPO	Metropolitan Planning Organization
MSRC	Mobile Source Air Pollution Reduction Review Committee
MTP	Metropolitan Transportation Plan
NAT	Needles Area Transit
NEPA	National Environmental Policy Act
NMTP	Non-Motorized Transportation Plan
OA	Obligation Authority
OCTA	Orange County Transportation Authority
OWP	Overall Work Program
PA	Project Advancement
PAA	Project Advancement Agreement
PA&ED	Project Approval and Environmental Document
PASTACC	Public and Specialized Transportation Advisory and Coordinating Council
PAYG	Pay-As-You-Go

PDT	Project Development Team
PPM	Planning, Programming and Monitoring Funds
PSE	Plans, Specifications and Estimates
PSR	Project Study Report
PTA	Public Transportation Account
PTMISEA	Public Transportation, Modernization, Improvement and Surface Enhancement Account
PUC	Public Utilities Commission
PVEA	Petroleum Violation Escrow Account
RCTC	Riverside County Transportation Commission
RDA	Redevelopment Agency
RFP	Request for Proposal
RIP	Regional Improvement Program
ROD	Record of Decision
RR	Railroad
RTAC	Regional Transportation Agencies' Coalition
RTIP	Regional Transportation Improvement Program
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RTPA	Regional Transportation Planning Agencies
SB	Senate Bill
SAFE	Service Authority for Freeway Emergencies
SAFETEA-LU	Safe Accountable Flexible Efficient Transportation Equity Act- A Legacy for Users
SANBAG	San Bernardino Associated Governments
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCRRA	Southern California Regional Rail Authority
SED	Socioeconomic Data
SHA	State Highway Account
SHOPP	State Highway Operations and Protection Program
SOV	Single-Occupant Vehicle
SRTS	Safe Routes to School
SRTP	Short Range Transit Plan
STAF	State Transit Assistance Funds
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TAC	Technical Advisory Committee
TCIF	Trade Corridors Improvement Funds
TCM	Transportation Control Measure
TCRP	Traffic Congestion Relief Program
TDA	Transportation Development Act
TEA	Transportation Enhancement Activities
TEA-21	Transportation Equity Act for the 21st Century
TIA	Traffic Impact Analysis
TMC	Transportation Management Center
TMEE	Traffic Management and Environmental Enhancement
TOC	Traffic Operations Center
TOPRS	Transit Operator Performance Reporting System
TSM	Transportation Systems Management
UP	Union Pacific
USFWS	United States Fish and Wildlife Service
VCTC	Ventura County Transportation Commission
VFI	Valley Freeway Interchange

VHD	Vehicle Hours of Delay
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled
VSDT	Valley Senior and Disabled Transit
VTMS	Valley Traffic Management Systems
VVATS	Victor Valley Area Transportation Study
VVMLH	Victor Valley Major Local Highway
VVLS	Victor Valley Local Streets
VVPDTMS	Victor Valley Project Development Traffic Management System
VVSDT	Victor Valley Senior and Disabled Transit
VVTA	Victor Valley Transit Authority
WRCOG	Western Riverside Council of Governments

VIII. Appendices

APPENDIX A Baseline Scenario Project Listing

APPENDIX B Aggressive Scenario Project Listing

Appendix A

Baseline Scenario Project Listing

APPENDIX A - Baseline Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
200201	Adelanto	El Mirage Rd from SR 395 to 1 Mile east to Adelanto Rd and on Adelanto Rd from El Mirage Rd to 1 mile south - Auburn Ave pave existing 2 lane road	2015	FTIP	$560
200049	Apple Valley	Mojave River Bridge crossing from terminus of Yucca Loma Rd to terminus of Green Tree Blvd includes widening Yates Rd 2 to 4 lanes from .24 mile north of Chinquapin to Fortuna - includes a bridge over the BNSF RR to Hesperia Rd	2016	FTIP	$46,477
20110602	Apple Valley	SR18 at Apple Valley Rd Intersection Realignment	2016	FTIP	$4,650
4A07071	Apple Valley	Widen Navajo Rd from SR-18 to Thunderbird Rd from 2 to 4 lanes	2020	RTP	$4,800
SBD55011	Apple Valley	Widen Yucca Loma Rd from Apple Valley Rd to Navajo Rd from 2 to 4 lanes	2016	FTIP	$6,500
20150003	Apple Valley	Widen Yucca Loma Rd from western terminis of Yucca Loma Rd to Apple Valley Rd from 2 to 4 lanes	2017	FTIP	$13,965
20150015	Barstow	In Barstow: I-15/Morton St Interchange; construct new Interchange. Includes a 6 lane bridge over I-15, 2 through lanes each direction, construction of new 4 lane roadway from IC to Outlet Center Dr (PA&ED only)	2021	FTIP	$43,000
200622	Barstow	Lenwood Grade Separation - North of West Main St - construct 4-lane grade separation	2015	FTIP	$31,590
20060606	Barstow Transit	Operating Expenses	2015	FTIP	$24,900
20040701	Barstow Transit	Paratransit - Vehicles 22 Passenger Replacement	2015	FTIP	$533
4A07195	Big Bear Lake	Intersection Signalization and Synchronization on Big Bear Blvd from West City Limits to East City Limits	2020	RTP	$1,600
4A01025	Big Bear Lake	Widen Big Bear Blvd from West Big Bear City Limits to East Big Bear City Limits from 2 to 4 lanes	2020	RTP	$18,634
0P240	CalTrans	Construct a new Vista Point at Route 138 with 10 parking spaces	2015	FTIP	$575
35558	CalTrans	Gateway Enhancements on I-15 from Mojave Dr. in Victorville to Stoddard Wells Rd in Barstow	2017	FTIP	$2,446
SBDLS07	CalTrans	Grouped projects for bridge rehabilitation and reconstruction (No new capacity) - SHOPP Program	2020	FTIP	$120,631
SBDLS09	CalTrans	Grouped projects for emergency response projects at various locations	2015	FTIP	$10,956
SBDLS02	CalTrans	Grouped projects for Pavement resurfacing and/or rehabilitation	2019	FTIP	$234,459
SBDLS14	CalTrans	Grouped projects for pavement resurfacing and/or rehabilitation on the State Highway System	2016	FTIP	$10,511
SBDLS05	CalTrans	Grouped projects for safety improvements	2015	FTIP	$9,402
SBDLS01	CalTrans	Grouped projects for safety improvements - SHOPP Collision Reduction Program	2019	FTIP	$296,051
SBDLS04	CalTrans	Grouped projects for safety improvements - SHOPP Mobility Program	2016	FTIP	$3,616
SBDLS011	CalTrans	Grouped projects for safey improvements - SHOPP Mandates Program	2020	FTIP	$20,314
SBDLS03	CalTrans	Grouped projects for shoulder improvements - SHOPP Roadside Preservation Program	2015	FTIP	$16,961
35556	CalTrans	I-15 - 0.5 miles north of Mojave Drive to 1.5 North of existing Stoddard Wells Road Overcrossing. Reconstruct D/E/Stoddard Wells Rd ICs. Construct new collector distributor road over D/E/and BNSF RR to parrallel I-15 NB, reconstruct/realign east/west frontage roads	2017	FTIP	$119,325
20061201	CalTrans	I-15/I-215 interchange improvements	2017	FTIP	$324,460
SBD31850	Caltrans	I-215 Barton Rd interchange reconstruction	2018	FTIP	$78,600
4H01008	Caltrans	I-215 from SR-210 to I-15, Add 1 HOV lane each direction	2035	RTP	$179,335
0G841	CalTrans	Install Interpretive displays at the C.V. Kane Safety Roadside Rest Area (SCRRA) near the City of Barstow	2015	FTIP	$260
34770	CalTrans	Kern Co Line to 7.5 miles east of US-395 junction - construct 4-lane expressway on new alignment, new interchange at US-395 and SR-58	2019	FTIP	$194,838

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RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
34040	CalTrans	Realign & widen US-395 to a 6-lane freeway from I-15 to SR-18 (PH1) & 4-lane freeway from SR-18 to Purple Sage (PH 2) & widen to 4-lane expressway from Purple Sage to 0.5 mi S/O Farmington Rd (PH 3). (PA&ED only)	2020	FTIP	$2,629
4351	CalTrans	SR-58 Expressway-Realign and widen from 2 to 4 lane expressway. New interchanges at Lenwood Rd and Hinkley Rd. 2.4 miles west of Hidden River Rd to 0.7 miles east of Lenwood Road (Phase 2)	2016	FTIP	$194,925
4M07008	Caltrans	SR-60: Widen aux lanes in each direction, widen connector from SB-15 to WB-60 and EB-60 to NB/SB-15, widen ramps from one to two lanes	2021	RTP	$71,000
34042	CalTrans	US 395 - new alignment construct 4-lane expressway from 1.8 miles south of Desert Flower Rd to 0.5 miles south of Farmington Rd (northerly alignment)	2020	FTIP	$459,978
34013	CalTrans	Widen 2 BNSF bridge structures on SR-138 1/2-mile west of I-15 from 2 to 4 lanes	2018	FTIP	$13,550
34011	CalTrans	Widen SR-138 from Phelan Rd to I-15 from 2 to 4 lanes with median	2016	FTIP	$87,181
200452	CalTrans	Widen US-395 from Chamberline Way to 1.8 miles S/O Desert Flower Rd as interim widening from 2 to 4 lanes	2019	FTIP	$28,838
200453	CalTrans	Widen US-395 from I-15 to SR-18 as interim widening from 2 to 4 lanes	2022	FTIP	$7,223
200451	CalTrans	Widen US-395 from SR-18 to Chamberlaine Way from 2 to 4 lanes	2019	FTIP	$55,191
4A01026	Chino	Widen Central Ave from Francis Ave to Riverside Dr from 6 to 8 lanes	2020	RTP	$2,642
4A01266	Chino	Widen Central Ave from Phillips Blvd to State St from 4 to 6 lanes	2020	RTP	$2,093
4120104	Chino	Widen Central Ave from Riverside Dr to SR-71 from 4 to 6 lanes	2020	RTP	$7,796
4A01028	Chino	Widen Chino Ave from Central Ave to Mountain Ave from 2 to 4 lanes	2020	RTP	$6,100
4A01030	Chino	Widen Chino Ave from Fern Ave to Euclid Ave from 2 to 4 lanes	2020	RTP	$4,043
4A07205	Chino	Widen Chino Ave from Mountain Ave to Fern Ave from 2 to 4 lanes	2020	RTP	$1,500
4A01062	Chino	Widen Chino Hills Pkwy from Ramona Ave to Chino Creek Bridge from 4 to 6 lanes	2020	RTP	$203
4A01033	Chino	Widen Edison Ave from Pipeline Ave to Ramona Ave from 4 to 6 lanes	2020	RTP	$2,907
SBD031118	Chino	Widen Edison Ave Ramona Ave to Central Ave from 4 to 6 lanes	2022	FTIP	$2,000
4A04035	Chino	Widen Euclid Ave from Kimball Ave to Pine Ave from 4 to 8 lanes	2020	RTP	$2,430
4A01272	Chino	Widen Francis Ave from 0.11 miles w/o East End to 0.13 miles e/o Telephone Ave from 2 to 4 lanes	2020	RTP	$5,255
4120100	Chino	Widen Francis Ave from Snyder Ave to Benson Ave from 2 to 4 lanes	2020	RTP	$507
4A01040	Chino	Widen Merrill Ave from Euclid Ave to East Chino City Limit from 2 to 3 lanes (eastbound only)	2020	RTP	$1,159
4A07329	Chino	Widen Mountain Ave from Bickmore Ave to El Prado Rd from 2 to 4 lanes	2020	RTP	$347
4A04045	Chino	Widen Pine Ave from Euclid Ave to Hellman Ave from 2 to 6 lanes	2020	RTP	$5,368
4A07303	Chino	Widen Pipeline Ave from Walnut Ave to 0.25 miles n/o Walnut Ave from 2 to 4 lanes	2020	RTP	$506
SBD031152	Chino	Widen Riverside Dr at San Antonio Flood Control Channel bridge from 4 to 6 lanes	2022	FTIP	$20,000
200202	Chino	widenChino Ave from Monte Vista Ave to Sixth St from 2 to 4 lanes and install signal at intersection of Chino Ave and Monte Vista Ave	2022	FTIP	$584
201114	Chino	Widening of Central Ave bridge crossing SR-60 to accommodate widening of ramps	2021	FTIP	$16,445
200207	Chino	widenPine Ave Extension bridge from SR 71 to Euclid Ave in the City of Chino from 2 to 4 lanes	2021	FTIP	$25,000
200401	Chino Hills	Extend Fairfield Ranch Rd from Franch Rd to Pine Ave intersection - construct new 2 lane road with bike lanes	2017	FTIP	$4,581
20083402	Chino Hills	Widen Peyton Dr from Eucalyptus to SR-142 from 2 to 4 lanes with marked bike lanes in each direction	2014	FTIP	$11,942
4A07116	Chino Hills	Widen Pine Ave from SR-71 to Chino Creek (north side only) in conjunction with Chino Project ID 200207	2020	RTP	$3,250

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RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
201157	Colton	Construct new 4-lane roadway Washington St from 0.90 miles west of Mt. Vernon Ave to La Cadena Dr (PA&ED Only)	2018	FTIP	$28,000
20110601	Colton	Replace La Cadena Dr 4 lane bridge over Santa Ana River, 1.5 miles south of I-10 with 6 lane bridge	2019	FTIP	$27,535
200064	Colton	Washington St from Reche Canyon to Hunts Ln - Eliminate bottleneck by adding NB turn pocket at Reche Canyon Rd (Exclusive Left and Right) through restriping and widening	2016	FTIP	$570
201158	Colton	Widen Agua Mansa from Rialto Channel to Rancho Ave from 2 to 4 lanes	2018	FTIP	$6,652
4A04071	Colton	Widen Mt. Vernon Ave from La Cadena Dr to Eastbound I-10 Ramps from 4 to 6 lanes	2020	RTP	$2,305
200856	Colton	Widen Mt. Vernon Bridge over UPRR from "M" St to I-10 on-ramp from 2 to 4 lanes	2019	FTIP	$9,038
200843	Colton	Widen Reche Canyon Rd from 1.20 miles of S. Barton Rd to 0.42 miles south of Barton Rd from 2 to 4 lanes	2017	FTIP	$5,650
20150302	Fontana	I-10 @ Beech Ave; Construct new 4-lane interchange (2 lanes each direction) (PA&ED Only)	2023	FTIP	$426
201139	Fontana	Construct 4-lane Casa Grande Ave from Lytle Creek Rd to Mango Ave	2021	FTIP	$10,500
201143	Fontana	Construct 4-lane Duncan Canyon Rd from Citrus Ave to Sierra Ave	2020	FTIP	$5,251
SBD031227	Fontana	Construct 6-lane Jurupa Ave Etiwanda Ave to Sierra Ave	2016	FTIP	$24,462
201142	Fontana	Construct new 2-lane Cypress Ave from Duncan Canyon Rd to Frontage Rd (I-15)	2021	FTIP	$3,200
4A01104	Fontana	Construct new 4-lane I-15 Frontage Rd from Duncan Canyon Rd to Riverside Ave	2020	RTP	$4,900
20131506	Fontana	San Sevaine Trail Connectivity; from just N of I-15/Cherry Ave IC along the San Sevaine Flood Control Basin S to County Line (PA&ED ONLY)	2020	FTIP	$170
SBD031218	Fontana	Widen Alder Ave Baseline to Foothill Blvd from 2 to 4 lanes	2020	FTIP	$2,624
SBD031233	Fontana	Widen Arrow Blvd Alder to Maple Ave from 2 to 4 lanes	2019	FTIP	$5,830
4120125	Fontana	Widen Arrow Blvd from Almeria Ave to Citrus Ave from 2 to 4 lanes	2020	RTP	$1,265
4A07024	Fontana	Widen Arrow Blvd from Hickory Ave to Tokay Ave from 2 to 4 lanes	2020	RTP	$5,969
SBD031235	Fontana	Widen Arrow Hwy Almeria to Citrus Ave from 2 to 4 lanes	2023	FTIP	$1,265
4A07066	Fontana	Widen Arrow Hwy from Alder Ave to Maple Ave from 2 to 4 lanes	2018	RTP	$5,000
SBD031217	Fontana	Widen Beech Ave Foothill to Miller Ave from 2 to 4 lanes	2020	FTIP	$4,630
4A07185	Fontana	Widen Beech Ave from Arrow Rte to Foothill Blvd from 2 to 4 lanes	2020	RTP	$1,721
4A07157	Fontana	Widen Beech Ave from Valley Blvd to Randall Ave from 2 to 4 lanes	2020	RTP	$2,531
4A07048	Fontana	Widen Ceres Ave from Mango Ave to Catawba Ave from 2 to 4 lanes	2020	RTP	$6,143
200409	Fontana	Widen Cherry Ave at SCRRA RR crossing bridge from 4 to 6 lanes on Cherry Ave over RR crossing (from Merrill St to Whittram Ave)	2015	FTIP	$8,829
201107	Fontana	Widen Cherry Ave from south Highland Ave to I-15 from 2 to 6 lanes	2020	FTIP	$2,625
4A07040	Fontana	Widen Cherry Ave from Valley Blvd to Foothill Blvd from 4 to 6 lanes	2020	RTP	$7,796
20150005	Fontana	Widen Citrus Ave from Jurupa Ave to Slover Ave from 2 to 4 lanes	2020	FTIP	$1,865
201140	Fontana	Widen Citrus Ave from Summit Ave to I-15 from 2 to 4 lanes	2021	FTIP	$2,625
201141	Fontana	Widen Cypress Ave from Slover Ave to Jurupa Ave from 2 to 4 lanes	2018	FTIP	$2,498
4120129	Fontana	Widen Duncan Canyon Rd from Citrus Ave to Sierra Ave from 0 to 4 lanes	2025	RTP	$5,251
4120130	Fontana	Widen Duncan Canyon Rd from I-15 to Citrus Ave from 0 to 4 lanes	2025	RTP	$1,312
201166	Fontana	Widen Duncan Canyon Rd from I-15 to Citrus Ave from 2 to 4 lanes	2019	FTIP	$1,312
SBD031228	Fontana	Widen Etiwanda Ave Riverside County Line to I-10 from 4 to 6 lanes	2020	FTIP	$2,635
SBD031246	Fontana	Widen Foothill Blvd Citrus Ave to Maple Ave from 4 to 6 lanes	2021	FTIP	$7,218
4A04102	Fontana	Widen Foothill Blvd from Hemlock Ave to Almeria Ave from 4 to 6 lanes	2020	RTP	$7,560

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RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
201144	Fontana	Widen Jurupa Ave from Tamarind Ave to Alder Ave from 2 to 4 lanes	2020	FTIP	$958
SBD031254	Fontana	Widen Merrill Ave Alder Ave to Maple Ave from 2 to 4 lanes	2019	FTIP	$2,065
4A04114	Fontana	Widen Merrill Ave from Catawba Ave to Fontana Ave from 2 to 4 lanes	2020	RTP	$1,400
4A07055	Fontana	Widen Merrill Ave from Cherry Ave to Catawba Ave from 2 to 4 lanes	2020	RTP	$5,771
4A07222	Fontana	Widen Randall Ave from Alder Ave to Cedar Ave from 2 to 4 lanes	2020	RTP	$1,266
200835	Fontana	Widen San Bernardino Ave from Cherry Ave to Fontana City Limits (Lime Ave) from 2 to 4 lanes	2016	FTIP	$4,065
4A07109	Fontana	Widen San Bernardino Ave from Etiwanda Ave to Cherry Ave from 4 to 6 lanes	2020	RTP	$3,375
SBD031266	Fontana	Widen Sierra Ave Foothill Blvd to Baseline Ave from 4 to 6 lanes	2021	FTIP	$8,129
4A04123	Fontana	Widen Sierra Ave from Slover Ave to Valley Blvd from 6 to 8 lanes	2020	RTP	$1,120
201146	Fontana	Widen Sierra Lakes Pkwy from Beech Ave to Citrus Ave from 2 to 4 lanes	2019	FTIP	$4,290
201147	Fontana	Widen Slover Ave from Etiwanda Ave to 800 feet east of Etiwanda Ave from 2 to 4 lanes	2020	FTIP	$2,095
201148	Fontana	Widen South Highland Ave from Cherry Ave to Citrus Ave from 2 to 4 lanes	2020	FTIP	$5,250
201162	Fontana	Widen Valley Blvd from Beech Ave to Citrus Ave from 4 to 6 lanes	2021	FTIP	$2,418
201149	Fontana	Widen Valley Blvd from Cherry Ave to Beech Ave from 4 ot 6 lanes	2021	FTIP	$2,418
201163	Fontana	Widen Valley Blvd from Citrus Ave to Sierra Ave from 4 to 6 lanes	2021	FTIP	$2,418
201164	Fontana	Widen Valley Blvd from Sierra Ave to Alder Ave from 4 to 6 lanes	2021	FTIP	$724
4A07027	Grand Terrace	Construct 4-lane Commerce Way extension from 900' n/o Pico St to Main St	2020	RTP	$14,388
201106	Grand Terrace	Construct 4-lane Commerce Way extension from Michigan Ave to Barton Rd at Vivienda Ave	2018	FTIP	$1,553
4A01139	Grand Terrace	Widen Barton Rd from Honey Hill Dr to NE Grand Terrace City Limits from 2 to 4 lanes	2018	RTP	$2,534
4A01141	Grand Terrace	Widen Barton Rd from I-215 to Southern Pacific RR from 2 to 4 lanes	2020	RTP	$1,798
4A07356	Grand Terrace	Widen Main St (WB Only) from SFRR to SPRR from 1 to 2 lanes	2020	RTP	$226
201105	Grand Terrace	Widen Michigan Ave from Commerce Way to Main St from 2 to 4 lanes	2019	FTIP	$1,423
4A01146	Grand Terrace	Widen Mt. Vernon Ave from Canal St to North Grand Terrace City Limits from 2 to 4 lanes	2018	RTP	$579
4160007	Hesperia	Construct 6-lane interchange for I-15 @ Muscatel St	2023	RTP	$21,100
4160006	Hesperia	Construct new interchange at I-15 @ Eucalyptus	2024	RTP	$61,100
20084104	Hesperia	Joshua St Park & Ride Expansion - on Joshua St west of US-395, City of Hesperia, add 200 spaces	2016	FTIP	$743
4A01147	Hesperia	Widen 7th Ave from Ranchero Rd to Bear Valley Rd from 2 to 4 lanes	2023	RTP	$11,370
20150008	Hesperia	Widen and reconstruct Main St from I-15 to Maple (Phase 1)/Maple to 11th (Phase 2)/ I-15 to SR-395 (Phase 3) from 4 to 6 lanes, including widening of bridge over California Aqueduct	2019	FTIP	$17,950
4160038	Hesperia	Widen I Ave from Ranchero Rd to Main St from 2 to 4 lanes	2020	RTP	$7,610
4160051	Hesperia	Widen Ranchero Rd from Danbury Ave to Arrowhead Lake Rd from 2 to 4 lanes	2022	RTP	$11,000
4160053	Hesperia	Widen Ranchero Rd from Mariposa Rd to BNSF RR from 2 to 4 lanes	2020	RTP	$15,000
SBD55030	Hesperia	Widen Ranchero Rd from Topaz Ave to 7th St from 2 to 4 lanes	2018	FTIP	$3,000
4160052	Hesperia	Widen Ranchero Rd from Topaz Ave to 7th St from 2 to 5 lanes	2017	RTP	$20,000
SBD55026	Hesperia	Widen/Reconstruct Eucalyptus St from I-15 to Peach Ave from 2 to 4 lanes and construct railroad crossing	2015	FTIP	$8,546
20130306	Highland	Construct City Creek Levee Trails - non-motorized trails along the easterly and westerly city creek flood control levees between Highland Ave and Base Line	2018	FTIP	$42
20061015	Highland	Construct new 4-lane Greenspot Rd Bridge at Santa Ana River - existing bridge will be preserved and rehabilitated for pedestrian, bicycle, and equestrian uses	2015	FTIP	$14,464

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RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
20131503	Highland	Palm Ave Historic District Improvements; Palm Ave (Base Line to Highland Ave) & Pacific St (Church Ave to 350 ft West of Palm) Shoulder improvements, new roundabout at Palm/Pacific Int, bike lanes (PA&ED Only)(Intersection improvements - no new lanes)	2018	FTIP	$79
200019	Highland	Reconstruct Base Line Bridge No. 54C0035 over City Creek (no new capacity)	2018	FTIP	$22,810
20130401	Highland	Replace 2-lane Orange St Bridge No. 54C0592 over Plunge Creek Overflow, 1.5 miles N of Pioneer Ave with 4-lane bridge	2018	FTIP	$4,630
201185	Highland	Shoulder and storm drain improvements on 3rd St from Victoria Ave to Palm Ave (remains 4 lanes)	2018	FTIP	$3,400
20131502	Highland	Shoulder improvements on 5th St from Victoria Ave to Palm Ave (no additional lanes)(PA&ED Only)	2017	FTIP	$4,000
20150401	Highland	Shoulder improvements on Del Rosa Dr from 3rd St to 5th St (non-capacity)	2020	FTIP	$680
20150306	Highland	Shoulder improvements on Pacific St from Palm Ave to Church Ave (non-capacity enhancing)	2017	FTIP	$1,100
2011105	Highland	Shoulder improvements Palm Ave from 3rd St to 5th St (No Widening)	2017	FTIP	$818
2011104	Highland	Shoulder improvements Victoria Ave from 3rd St to 6th St (No Widening)	2017	FTIP	$3,075
2011154	Highland	SR 210 @ 5th St/Greenspot Rd; On and Off Ramps widening; add lanes - Project adds 1 lane N/B to existing 2 lanes and adding 2 lanes to existing to lanes to N/B off ramp and adding 1 lane to Existing 2 lane S/B off ramp	2017	FTIP	$6,225
201186	Highland	SR-210/Base Line IC: Reconstruct/widen Base Line between Church Ave and Boulder Ave from 4 to 6 lanes	2021	FTIP	$15,512
20131501	Highland	Street and landscaping improvements on Boulder Ave from San Manuel Village Entrance to Greenspot Rd (non-capacity enhancements)	2018	FTIP	$2,500
200213	Highland	Widen 3rd St from Palm Ave to 5th St from 2 to 3 lanes and extend 3rd St easterly to connect 5th St	2018	FTIP	$1,571
201153	Highland	Widen 5th St from City Creek to SR-210 from 4-6 lanes; Restripe SR-210 Undercrossing from 4 to 5 lanes between ramps with additional turn lane	2019	FTIP	$5,070
201183	Highland	Widen 5th St from Tippecanoe Ave to Del Rosa Dr from 2 to 4 lanes	2020	FTIP	$5,255
4A07062	Highland	Widen 9th St from Eucalyptus Dr to Victoria Ave from 2 to 4 lanes	2020	RTP	$381
20082402	Highland	Widen Base Line between Church Ave and Seine Ave from 4 to 6 lanes (excluding freeway bridge over SR-210)	2020	FTIP	$1,200
201191	Highland	Widen Base Line from Seine Ave to Stoney Creek Dr from 4 to 6 lanes	2021	FTIP	$583
SBD55033	Highland	Widen Boulder Ave from Greenspot to South City Limits from 2 to 4 lanes	2019	FTIP	$2,350
201180	Highland	Widen Del Rosa Drive from 5th Street to 6th Street from 2 to 4 lanes	2021	FTIP	$673
4160033	Highland	Widen Greenspot Rd from Boulder Ave to Valencia Ct from 4 to 6 lanes	2022	RTP	$1,798
4A01173	Highland	Widen Greenspot Rd from Gold Buckle Rd to Santa Ana River from 2 to 4 lanes (Excluding Bridge)	2022	RTP	$9,603
201156	Highland	Widen Greenspot Rd from Santa Paula St to south City Limit from 2 to 4 lanes	2020	FTIP	$22,530
201184	Highland	Widen Sterling Ave from 3rd Street to 5th Street from 2 to 4 lanes	2018	FTIP	$400
201182	Highland	Widen Tippecanoe Ave from 3rd Street to 5th St from 2 to 4 lanes	2020	FTIP	$798
SBD31876	Loma Linda	Widen California St Barton Rd to Redlands Blvd from 2 to 4 lanes	2018	FTIP	$1,090
SBD031294	Loma Linda	Widen Redlands Blvd at California St intersection and install traffic signals and drainage and curb and gutters	2016	FTIP	$6,000
SBD41055	MARTA	Bus System - Operating Assistance	2017	FTIP	$21,548
200423	MARTA	Paratransit Vehicles - Replacement	2016	FTIP	$3,923
20150013	MARTA	Rehab/Repair/Retrofit Transit Facilities	2015	FTIP	$729
20010120	MARTA	Transit Service/Rehab Equipment - Purchase of various maintenance equipment	2016	FTIP	$63
SBD31037	MBTA	Bus System - Operating Assistance	2017	FTIP	$21,933
20110104	MBTA	Dispatch & Maintenance Office Equipment	2017	FTIP	$85

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RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
20110105	MBTA	Replace Cummins Engines at midlife to ensure they are kept in top performing order. The engine overhauls for 28-33 passenger vehicles only.	2017	FTIP	$180
20130601	MBTA	Replacement Buses Type 3 Class C. 18 pax CNG Vehicles	2017	FTIP	$1,189
20010135	Montclair	Monte Vista @ UP RR Crossing - Grade Separation	2016	FTIP	$20,262
20150001	Montclair	Widen Central Ave Bridge No. 54C0112 over UP RR Amtrak Metrolink from 4 to 6 lanes bridge with sidewalks	2020	FTIP	$17,167
SBD31612	Needles	Bus System - Operating Assistance	2016	FTIP	$3,679
R589TA	Needles	El Garces Station Multimodal Improvement Design	2016	FTIP	$8,290
20112007	Needles	I-40 Needles Connector: Roadway/Sidewalk improvements : J St from I-40 Off-ramps to W Broadway; W Broadway from J St to Needles Hwy; Needles Hwy from W Broadway to N K St; N K St; N K St To S/Abutment of CO River Bridge Intersecton Improvements at J St/W Broadway, W Broadway/Needles Hwy, Needles Hwy/N K St	2017	FTIP	$5,521
SBD44003	Needles	Paratransit Vehicle Replacement	2017	FTIP	$387
SBD90105	OmniTrans	Bus System - Buses Bus Replacements Alt Fuel, 15 coaches per year	2015	FTIP	$63,012
SBD31084	OmniTrans	Bus System - Service Vehicles, purchase replacement service vehicles	2016	FTIP	$2,862
20060601	OmniTrans	Capitalization of Leases - for Contractors, Radio, Sites, APC, Tire Leases	2016	FTIP	$5,359
981122	OmniTrans	Capitalization of Preventive Maintenance	2016	FTIP	$90,153
20080206	OmniTrans	Chino Transit Center Phase II - additional Bus Bays for future Inter-County routes	2016	FTIP	$2,527
20061701	OmniTrans	Jobs Access and Reverse Commute Administration Operations and Capital Section 5316 various projects	2015	FTIP	$5,227
20061901	OmniTrans	New Freedom Program Administration, operations and capital	2015	FTIP	$1,395
20111201	OmniTrans	Operations of the access service	2018	FTIP	$10,000
20060603	OmniTrans	Passenger Facilites San Bernardino Valley - Purchase equipment for stop and zone improvements	2015	FTIP	$972
20150109	OmniTrans	Pedestrian & Bicycle Access Improvements within 1/2 mile of Rapid Transit Stations (Terminis at Pomona Downtown Metrolink Station & Kaiser Medical Center Fontana, following Holt Ave/Blvd, Archibald Ave, Milliken Ave, Foothill Blvd, & Sierra Ave)	2018	FTIP	$25,125
20040211	OmniTrans	Replacement Paratransit vehicles replacing Paratransit Vehicles on Omnitrans Access Fleet	2015	FTIP	$11,884
981111	OmniTrans	Transit - Enhancement: 1% Transit Enhancements to increase accessibility to Bus Stops (ongoing)	2016	FTIP	$1,748
20020806	OmniTrans	Transit - Facilities - Improvement/Upkeep of existing facilities	2015	FTIP	$8,013
981114	OmniTrans	Transit - Security capitalization of security costs	2016	FTIP	$1,493
SBD31055	OmniTrans	Transit Administration Equipment purchase computer hardware & software	2016	FTIP	$32,893
4A07227	Ontario	Construct 4-lane bridge on Francis St over West Cucamonga Creek	2017	RTP	$108
4A07260	Ontario	Construct bridge on 6th St over Cucamonga Creek-Sidewalk only	2020	RTP	$740
4160002	Ontario	I-10 @ Vineyard Ave interchange widening from 4 to 6 lanes, widen on/off ramps	2030	RTP	$84,000
200805	Ontario	North Vineyard Ave UPRR Grade Separation between Holt Blvd and Airport Dr (no new capacity)	2017	FTIP	$55,195
4160009	Ontario	Reconstruct SR-60 @ Grove Ave interchange	2040	RTP	$51,000
200602	Ontario	Reconstruct SR-60 and Vineyard Ave interchange - lengthen bridge to accommodate Vineyard Ave widening from 4 to 6 lanes and ramp widening	2022	FTIP	$7,621
2002160	Ontario	Relocate I-10 & 4th St IC to Grove Ave and widen Grove Ave between I-10 to Holt Blvd (4 to 6 lanes): Widen Grove Ave from State St to 350 ft N of Holt Blvd includding RR Bridge (4 to 6 lanes) (PA&ED)	2025	FTIP	$13,034
200405	Ontario	S. Milliken Ave Grade Separation - On Milliken from UPR to North of Mission Blvd RR Grade Separation	2018	FTIP	$81,986

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RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
200804	Ontario	South Archibald Ave grade separation (at Mission Blvd). Construct grade separtion at existing at-grade crossing south of Archibald Ave and the UPPR-Los Angeles Line. Widen from 2 to 6 Lanes	2023	RTP	$57,932
201132	Ontario	SR-60 at Archibald Ave interchange widen on- and off-ramps (2 to 3 lanes each way) (non-capacity enhancing along Archibald Ave)	2021	FTIP	$7,900
200604	Ontario	SR-60 at Grove Ave Interchange reconstruction and widen Grove Ave from 4 to 6 lanes	2022	FTIP	$7,621
4A04192	Ontario	Widen Bellegrave Ave from Sumner Ave to Milliken Ave (Hamner Ave) from 2 to 4 lanes	2020	RTP	$11,869
4A04194	Ontario	Widen Chino Ave from Euclid to Milliken Blvd from 2 to 4 lanes	2020	RTP	$15,211
4A01203	Ontario	Widen Francis St from Benson Ave to Campus Ave from 2 to 4 lanes	2017	RTP	$3,225
20150201	Ontario	Widen Grove Ave from I-10 to Airport Dr (4 lanes) concurrent with I-10/ Grove Ave IC Project (2002160)	2025	FTIP	$2,293
4A01210	Ontario	Widen Holt Blvd from Benson Ave to Vineyard Ave from 4 to 6 lanes	2020	RTP	$9,746
4A01213	Ontario	Widen Jurupa St from Turner Ave to Hofer Ranch Rd from 2 to 6 lanes	2017	RTP	$734
4A07233	Ontario	Widen Mission Blvd from Benson Ave to Milliken Ave from 4 to 6 lanes	2017	RTP	$13,600
4120147	Ontario	Widen Mountain Ave from Brooks St to 6th St from 4 to 6 lanes	2018	RTP	$6,449
4A07138	Ontario	Widen Philadelphia St from Vineyard Ave to Cucamonga Creek from 2 to 4 lanes, including bridge over Cucamonga Creek	2017	RTP	$1,865
200048	Rancho Cucamonga	I-15 at Baseline Rd interchange improvement; widen Baseline Rd from 4 to 6 lanes, widen East Ave from 2 to 4 lanes, realign and widen SB and NB Diamond ramps from 1 to 2 lanes, add SB loop on ramp	2016	FTIP	$57,504
201137	Rancho Cucamonga	Intersection improvements at Foothill Blvd/Archibald Ave	2020	RTP	$640
20020134	Rancho Cucamonga	Widen Arrow Route from Etiwanda to East Rancho Cucamonga City Limit from 2 to 4 lanes	2022	RTP	$1,100
4120161	Rancho Cucamonga	Widen Arrow Rte from 500' ft e/o I-15 to 1300' e/o I-15 from 2 to 4 lanes	2017	RTP	$1,107
4160029	Rancho Cucamonga	Widen Cherry Ave from South Rancho Cucamonga City Limits to Wilson Ave from 2 to 4 lanes	2021	RTP	$830
20150004	Rancho Cucamonga	Widen Foothill Blvd (Old State Rte 66) between Grove Ave and San Bernardino Rd from 4 to 6 lanes	2017	FTIP	$6,006
200035	Redlands	Construct Wabash Ave 4-lane road from 5th St to I-10 to match on and off ramps	2018	FTIP	$950
20081704	Redlands	I-10/Alabama St and Redlands Blvd and Alabama St/Colton Ave intersection improvements - widen intersection approaches on all four legs of Redlands Blvd/Alabama St intersection. Realign Alabama St on North side of intersection	2020	FTIP	$13,317
20020202	Redlands	Redlands Park Once Program - New parking structure between Eureka St and 3rd St S/O Stuart Ave and N/O RR approximately 200 Spaces (Not PNR)	2020	FTIP	$7,600
200432	Redlands	Signal and intersections improvements at I-10 and Ford St on-ramp	2018	FTIP	$700
200419	Redlands	Widen Alabama St from 2 to 4 lanes from North city limits to 3,000 ft North Palmetto Ave	2017	FTIP	$7,200
4A01248	Redlands	Widen Orange St from Lugonia Ave to North Redlands City Limits from 2 to 4 lanes	2025	RTP	$11,027
201113	Redlands	Widen the east side of Orange St from Lugonia Ave to San Bernardino Ave	2016	FTIP	$540
200603	Rialto	Remove and replace 5-lane Riverside Ave bridge over Metrolink and BNSFwith 7 lane bridge	2016	FTIP	$37,935
200450	Rialto	Rialto Metrolink Station - Increase parking spaces from 225-775	2015	FTIP	$3,356
4A07121	Rialto	Widen and reconstruct Baseline Ave from Maple Ave to Linden Ave from 3 to 4 lanes	2020	RTP	$250
SBD031361	Rialto	Widen Ayala Dr Baseline Rd to SR-210 from 2 lanes to 4 lanes	2015	FTIP	$3,431
SBD59023	San Bernardino, City	Construct 4-lane Campus Pkwy extension from Kendall Dr to I-215 Fwy	2024	FTIP	$22,000
SBD59021	San Bernardino, City	Construct State St 4-lane extension from Hanford St to Foothill Blvd	2020	FTIP	$17,628
SBD59204	San Bernardino, City	I-215 @ University Pkwy interchange reconfiguration	2022	FTIP	$23,998
20150012	San Bernardino, City	Intersection improvements for Foothill Blvd (State Route 66) at Fourth	2016	FTIP	$1,137

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RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
SBD31905	San Bernardino, City	Replace 4-lane Mt Vernon Ave Bridge at BNSF with 4-lane bridge from 2nd St to 5th St	2018	FTIP	$72,235
201181	San Bernardino, City	Shoulder widening on 3rd St from Tippecanoe Ave to Leland/Norton Way and from Leland/Norton Way to Victoria Ave	2018	FTIP	$3,200
SBD59019	San Bernardino, City	Widen 40th St from Acre Ln to Electric Ave from 2 to 4 lanes	2019	FTIP	$3,264
201170	San Bernardino, City	Widen 5th St from Sterling Ave to Victoria Ave from 2 to 4 lanes	2018	FTIP	$5,800
SBD55031	San Bernardino, City	widen Alabama St from 3rd St to South city limits from 2 to 3 S/B lanes	2018	FTIP	$1,078
201169	San Bernardino, City	Widen H St from Kendall Dr to 40th St from 2 to 4 lanes	2018	FTIP	$918
4A07086	San Bernardino, City	Widen Kendall Dr from Cambridge Ave to Pine Ave from 2 to 4 lanes	2020	RTP	$5,027
4A07060	San Bernardino, City	Widen Kendall Dr from Palm Ave to Cajon Blvd from 2 to 4 lanes	2020	RTP	$5,216
SBD41317	San Bernardino, City	Widen Mt View Ave Bridge at Mission Creek Channel to 4 lanes (2 in each direction)	2015	FTIP	$1,655
4A07211	San Bernardino, City	Widen Mt View Ave Bridge/Culvert at Mission Creek Channel and extend bridge at Mt View Ave from 1 to 2 lanes; new bridge at-grade RR Crossing (SB only)	2020	RTP	$1,440
SBD41316	San Bernardino, City	Widen Mt View Ave Railway Grade Crossing from 2 to 4 lanes	2016	FTIP	$1,589
200609	San Bernardino, City	Widen/extend Mt View Ave from 2 to 4 lanes (SB only) from Coulston Ave to Riverview Dr (South of Santa Ana River)	2016	FTIP	$7,500
20150009	San Bernardino, County	Construct and extend Shadow Mt Rd from Helendale Rd East to Nth from 2 to 4 lanes including 4 lane bridge over Mojave River & Grade Separation over rail tracks with additional connect to Vista Rd on W side of tracks (PA&ED Only)	2019	FTIP	$3,970
20150002	San Bernardino, County	Construct paved 2-lane Duncan Rd from Wilson Ranch Rd to Baldy Mesa	2016	FTIP	$6,600
4A07051	San Bernardino, County	Construct paved 2-lane Wilson Ranch Rd from Duncan Rd to Palmdale Rd	2023	RTP	$6,000
200408	San Bernardino, County	Extend Cumberland Dr from SH-18 North to Cumberland Dr as 2-lane road	2020	FTIP	$3,000
20040826	San Bernardino, County	Glen Helen Pkwy at UPRR and BNSF - Grade Separation	2015	FTIP	$25,885
20130102	San Bernardino, County	I-10/Pepper Ave bridge - widen from 3 to 5 lanes to provide for one additional through lane, one additional southbound turn lane and construct minor ramp improvements, minor arterial street improvements	2017	FTIP	$7,675
SBD41339	San Bernardino, County	I-10/Pepper interchange - widen bridge from 5 to 6 lanes to provide additional southbound turn lane	2016	FTIP	$39,815
20150102	San Bernardino, County	Pavement Preservation/Rehabilitation Morongo Basin-Joshua Tree Area Roads: Yucca Trail, Alta Loma Dr, Quail Springs Rd, Aberdeen Dr, Park Blvd	2016	FTIP	$1,834
SBD031426	San Bernardino, County	Realign, rehabilitate Needles Hwy from N St to Nevada State Line	2021	FTIP	$13,476
200810	San Bernardino, County	Replace 2-lane Baker Blvd Bridge over Mojave River, 0.2 miles SW of Death Valley Rd with 4-lane bridge	2018	FTIP	$13,516
200619	San Bernardino, County	Replace 2-lane Glen Helen Pkwy bridge at Cajon Creek with 4-lane bridge	2017	FTIP	$28,300
20110603	San Bernardino, County	Replace Rock Springs Rd 2-lane low water crossing of Mojave River, 0.9 miles East Arrowhead Lake Rd, with new 4 lane bridge	2020	FTIP	$16,563
20130402	San Bernardino, County	Restripe existing structural section of Baker Blvd between I-15 ramps and SH 127 from 2 to 4 lane configuration in conjunction with project to replace existing 2 lane bridge 54CO127 with 4 lane bridge	2016	FTIP	$25
4A07020	San Bernardino, County	Safety upgrades to National Trails Highway in San Bernardino County	2020	RTP	$12,000
4120193	San Bernardino, County	Various Traffic Signal Projects Throughout San Bernardino County	2023	RTP	$51,992
4A07322	San Bernardino, County	Widen Alder Ave from Jurupa Ave to 0.12 miles n/o Jurupa Ave from 2 to 4 lanes	2023	RTP	$403
4A07074	San Bernardino, County	Widen Bear Valley Rd Cutoff from Joshua Rd to SR-18 from 2 to 6 lanes	2023	RTP	$600,600
4A07104	San Bernardino, County	Widen Beech Ave from Randall Ave to Arrow Route from 2 to 4 lanes	2020	RTP	$3,476
4A07125	San Bernardino, County	Widen Devore Rd from I-215 to Kenwood Dr from 2 to 4 lanes	2023	RTP	$3,609

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RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4A07300	San Bernardino, County	Widen Devore Rd from Kenwood Dr to Foothill Dr from 2 to 4 lanes	2023	RTP	$654
4A07087	San Bernardino, County	Widen El Rivino Rd from Cedar Ave to Agua Mansa Rd from 2 to 4 lanes	2023	RTP	$4,185
4A07209	San Bernardino, County	Widen Emerald Rd from Palmdale Rd to Seneca Rd from 2 to 4 lanes	2020	RTP	$1,485
4A07036	San Bernardino, County	Widen Glen Helen Pkwy from Lytle Creek Rd to I-15 from 2 to 4 lanes	2023	RTP	$2,283
4A07299	San Bernardino, County	Widen Jurupa Ave from Lilac Ave to Willow Ave from 2 to 4 lanes	2023	RTP	$540
4A07165	San Bernardino, County	Widen Jurupa Ave from Locust Ave to Cedar Ave from 2 to 4 lanes	2023	RTP	$2,228
4A01278	San Bernardino, County	Widen Phelan Rd from Sheep Creek Rd to Baldy Mesa Rd from 2 to 6 lanes	2020	RTP	$24,797
200815	San Bernardino, County	Widen Ranchero St from Mariposa to Hesperia CL from 2 to 4 lanes	2020	FTIP	$12,450
4A07079	San Bernardino, County	Widen San Bernardino Ave from Laurel Ave to Rialto City Limits from 2 to 4 lanes	2023	RTP	$3,067
4A07132	San Bernardino, County	Widen Santa Ana Ave from Cedar Ave to Cactus Ave from 2 to 4 lanes	2023	RTP	$2,268
4A07159	San Bernardino, County	Widen Santa Ana Ave from Locust Ave to Cedar Ave from 2 to 4 lanes	2023	RTP	$1,744
4A01284A	San Bernardino, County	Widen Sierra Ave from I-15 to Lytle Creek Rd from 2 to 4 lanes (currently is 2 NB/1 SB, widen to 2 lanes each direction)	2020	RTP	$679
20150010	San Bernardino, County	Widen Slover Ave from Tamarind Ave to Alder/Linden Ave to Cedar Ave from 2 to 4 lanes	2016	FTIP	$2,577
4A07043	San Bernardino, County	Widen Spring Valley Pkwy from Huerta Rd to Driftwood Dr from 2 to 4 lanes	2020	RTP	$7,425
4A07218	San Bernardino, County	Widen Valley Blvd from Commerce Dr to Almond Ave from 4/5 to 6 lanes (3 lanes each direction)	2020	RTP	$1,316
200837	San Bernardino, County	Widen Vista Rd from 2 to 4 lanes and construct grade separation	2020	FTIP	$50,000
4A07235	San Bernardino, County	Widen Wabash Ave from 0.30 miles s/o 7th St to 0.13 miles n/o 7th St from 2 to 4 lanes	2020	RTP	$107
4A07321	San Bernardino, County	Widen Wabash Ave from 6th Ave to 5th Ave from 2 to 4 lanes	2023	RTP	$350
20150103	San Bernardnio, County	Resurface Needles Hwy from 600 North of Balboa Pl to N St	2017	FTIP	$585
20150108	SANBAG	Bicycle and Pedestrian Accessibility improvements at Metrolink Stations (Montclair, Upland, Rancho Cucamonga, Fontana, Rialto, and San Bernardino) Phase I.	2021	FTIP	$4,679
20110109	SANBAG	Construct new railroad grade-separated crossing between Laurel St and the BNSF Railroad in the City of Colton (No new capacity)	2015	FTIP	$59,855
20150307	SANBAG	Countyide Vanpool Project (Demonstration Project)	2016	FTIP	$4,000
4TL104	SANBAG	Countywide Local Transit Service Operations	2040	RTP	$2,333,111
4122001	SANBAG	Double tracking of Metrolink San Bernardino Line between CP Lilac and CP Rancho in San Bernardino County	2025	RTP	$64,000
4TR0101	SANBAG	Extend Metrolink rail service from Rialto/E St in San Bernardino to Redlands	2020	RTP	$242,000
SBD031505	SANBAG	Grouped projects for LTF Article 3 Projects LTF, Article 3 Bicycle/Pedestrian Projects	2015	FTIP	$14,727
20159907	SANBAG	I-10 @ Alabama St interchange - Widen overcrossing from 4 to 6 lanes and reconfigure ramps	2024	FTIP	$41,710
20159906	SANBAG	I-10 @ Monte Vista Ave interchange - Widen Undercrossing from 4 to 6 lanes and ramp improvements	2021	FTIP	$30,199
4120199	SANBAG	I-10 @ Mountain View Ave interchange improvements	2040	RTP	$51,000
44811	SANBAG	I-10 @ Tippecanoe interchange add Eastbound off-ramp auxiliary lane from Waterman on-ramp to Tippecanoe off ramp and widen bridge (non-capacity)	2015	FTIP	$21,503
20131504	SANBAG	I-10 @ University St Interchange: Intersection improvements with on/off ramp widening (No capacity enhancements)	2019	FTIP	$5,100
20159902	SANBAG	I-10 Corridor Express Lane widening (Phase 1): From San Antonio Ave to I-10/I-15 IC; 4 general purpose and 2 express lanes in each direction	2022	FTIP	$524,278
20159903	SANBAG	I-10 Corridor Express Lane Widening (Phase 2): Implement 2 express lanes in each direction from I-10/I-15 Interchange to California St and 1 express lane in each direction from California St to Ford St in Redlands	2024	FTIP	$1,064,443

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SBD031279	SANBAG	I-15 @ Ranchero Rd - Construct 6-lane interchange	2015	FTIP	$64,346
4M01041	SANBAG	I-15 @ Sierra Ave interchange improvements	2030	RTP	$21,287
4122007	SANBAG	I-15 Express Lane Addition Express Lanes - add 2 Express Lanes in each direction (Segment 4)	2030	RTP	$570,000
4160005	SANBAG	I-15 Express Lane Addition from SR-210 to I-15/I-215 Interchange - add 2 Express Lanes in each direction (Segment 3)	2026	RTP	$150,000
4160008	SANBAG	I-15 Express Lane Addition from US-395 to High Desert Corridor - add 1 Express Lane in each direction (Segment 5)	2034	RTP	$140,000
20159901	SANBAG	I-15 Express Lanes - add 2 Express Lanes in each direction from Cantu Galleano Rd to SR-210 and 1 Express Lane each direction from SR-210 to Duncan Canyon Rd	2022	FTIP	$350,000
4M01043	SANBAG	I-215 @ Mt Vernon Ave/Washington Ave interchange improvements	2035	RTP	$109,048
200614	SANBAG	I-215 Bi-County HOV Lane Gap Closure - Add 1 HOV lane in each direction from Spruce St on SR-91 to Orange Show Rd	2015	FTIP	$182,802
4M0803	SANBAG	I-215 Bi-County Improvement Project - Add 1 mainline lane in each direction	2035	RTP	$250,000
4120222	SANBAG	Light rail extended from County Line to Montclair (Phase 2B)	2035	RTP	$156,318
20061009	SANBAG	Metrolink - Sealed Corridor - San Gabriel Subdivision - comprehensive Corridor Safety Enhancement Program along SANBAG owned ROW	2016	FTIP	$4,573
990602	SANBAG	Metrolink Capital Maintenance - Rehabilitation/Renovation of Metrolink equipment including purchase of 20 Tier-4 Locomotives	2015	FTIP	$37,847
SBD41109	SANBAG	Metrolink Operating Assistance Southern California Regional Rail Authority	2016	FTIP	$61,951
20150016	SANBAG	Metrolink Rolling Stock - SANBAG's share of purchase of Metrolink Cars & locomotives up to 47 Cars/Cabs and 8 locomotives	2015	FTIP	$3,000
2011151	SANBAG	Mojave Desert Air Basin Rideshare Program	2015	FTIP	$3,746
4122003	SANBAG	On I-10 construct easbound truck climbing lane from Live Oak Canyon Rd to Singleton Rd including transition between county line and Calimesa Blvd	2023	RTP	$50,000
200850	SANBAG	Palm Ave Grade Separation (No additional capacity)	2015	FTIP	$26,398
20061012	SANBAG	Passenger Rail from San Bernardino Metrolink Station to new transit station at Rialto Ave and E St in Downtown San Bernardino	2015	FTIP	$83,713
4RL04	SANBAG	Rideshare	2020	RTP	$1,600
2011150	SANBAG	South Coast Air Basin Rideshare Program	2015	FTIP	$6,571
4M07007	SANBAG	SR-210 @ Baseline Ave interchange improvements	2020	RTP	$15,600
20110110	SANBAG	SR-210 @ Pepper interchange improvements - Construct new diamond interchange and widen Pepper Ave from 2 to 4 lanes from Highland Ave to existing 4 lane section S/O interchange	2016	FTIP	$23,770
4M01049	SANBAG	SR-210 @ Waterman Ave interchange improvements	2040	RTP	$51,000
20084106	SANBAG	SR-210 Landscaping Segments 8-11 from Sierra Ave to SR-210/I-215	2015	FTIP	$8,499
20111625	SANBAG	SR-210 Lane Addition - Add 1 Mixed Flow lane in each direction from Highland Ave to San Bernardino Ave	2021	FTIP	$132,163
4160012	SANBAG	SR-60 @ Euclid Ave interchange improvements	2040	RTP	$6,000
4PL07019	SANBAG	SR-60 @ Mountain Ave interchange reconstruction	2027	RTP	$15,000
4120202	SANBAG	SR-60 @ Ramona Ave interchange reconstruction	2027	RTP	$30,000
4A07004	SANBAG	Widen US-395 from I-15 to SR-18 (Palmdale Rd) from 2 to 6 lanes or 4 to 6 lanes	2035	RTP	$40,000
4CR04	SCRRA	Service Expansion; SB Line 50 daily trains, Riverside line 46 daily trains, IEOC line 28 daily trains	2030	RTP	$20,000

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SBD41427	Twentynine Palms	Construct new 2-lane Amboy Rd from Lear Ave to Adobe Rd (PA&ED Only)	2021	FTIP	$40
201103	Upland	Foothill Blvd Bottleneck and Safety Improvements from Central Ave to Grove Ave	2021	FTIP	$5,300
4160003	Upland	I-10 @ Euclid Ave interchange reconstruction	2030	RTP	$9,003
SBD88086	Upland	Storm Drain Extension on Euclid Ave from D St to Foothill Blvd	2024	FTIP	$4,250
20040825	Upland	Upland Metrolink Station - Additional Parking from 200 to 500 spaces	2013	FTIP	$3,665
201101	Upland	Widen Arrow Route from Monte Vista Ave to Central Ave from 2 to 4 lanes	2018	FTIP	$2,200
4A01296	Upland	Widen Central Ave from Foothill Blvd to Benson Ave from 0 to 4 lanes	2020	RTP	$14,361
20131103	Various Agencies	Grouped Projects for Bicycle and Pedestrian Facilites funded by Recreational Trails Program	2016	FTIP	$1,267
SBDLS08	Various Agencies	Grouped Projects for Bridge Rehabilitation and Reconstruction - HBP Program	2018	FTIP	$133,297
20131301	Various Agencies	Grouped Projects for Operating Assistance to Transit Agencies	2015	FTIP	$356
20150106	Various Agencies	Grouped Projects for Safety Improvements (Regional): Safe Routes to School Program (SRTS)	2017	FTIP	$8,416
20150104	Various Agencies	Grouped Projects for Safety Improvements (State): Safe Routes to School Programs (SR2S)	2017	FTIP	$2,122
1830	Various Agencies	I-10 @ Cedar Ave interchange reconstruction between Slover Ave and Valley Blvd - widen from 4 to 6 lanes	2019	FTIP	$62,930
44812	Various Agencies	I-10 @ Tippecanoe reconfigure interchange (Westbound - Phase II)	2015	FTIP	$58,906
SBD41446	Various Agencies	I-15 @ Eucalyptus - construct 6 lane standard interchange	2024	FTIP	$61,100
201111	Victorville	Bridge rehab on National Trails Hwy and Mojave River	2018	FTIP	$1,375
SBD97147	Victorville	Construct 4-lane Green Tree Blvd Bridge at AT&SF & connect to Ridgecrest Rd	2020	FTIP	$40,098
20131101	Victorville	Mojave Riverwalk: Construct a 9.5 mile (Class I, II, III) Bike and Ped Path connecting the Victor Valley Transportation Center (6th St), Mojave Narrows Regional Park (Yates Rd) and Victor Valley College (Bear Valley Rd)	2018	FTIP	$3,050
200416	Victorville	SCLA Rail Service from Air Expressway approx 5 miles N/O to Colusa Rd between Phantom East & Mojave River - New freight Rail Line from BNSF to SCLA in connection with new intermodal/multimodal facility at SCLA	2019	FTIP	$250,000
SBD031422	Victorville	Widen 3rd Ave Nisqualli Rd to Green Tree Blvd from 2 lanes to 4 lanes	2023	RTP	$750
200866	Victorville	Widen 6-lane Bear Valley Rd Bridge No 54C0547 over BNSF/UPRR to 7-lane bridge and seismic retrofit	2018	FTIP	$5,849
4A07170	Victorville	Widen Aster Rd from Mojave Dr to Cactus Rd from 2 to 4 lanes	2020	RTP	$2,025
4A07348	Victorville	Widen Monte Vista Rd (Aster Rd) from Bear Valley Rd to Sycamore Rd from 0 to 4 lanes	2020	RTP	$2,000
201179	Victorville	Widen National Trails Hwy between I-15 & Air Expressway from 2 to 4 lanes	2017	FTIP	$4,000
4A07025	Victorville	Widen National Trails Hwy Bridge over Mojave River (replace existing bridge) widen 2 from to 4 lanes	2035	RTP	$10,000
20130302	VVTA	Bus Rehabilitation	2015	FTIP	$885
SBD41084	VVTA	Bus System - Buses Replacement - Alt Fuel	2015	FTIP	$10,526
SBD31581	VVTA	Bus System - Operating Assistance	2016	FTIP	$82,154
200086	VVTA	Bus System - Passenger Facilities	2019	FTIP	$1,175
SBD41117	VVTA	Bus System - Purchase Service Vehicles	2016	FTIP	$780
20111805	VVTA	Buses - Rehabilitation/Improvements - Spare Parts/Associated Capital Maintenance Items	2016	FTIP	$475
20110302	VVTA	Capital - Bus Facility - Capital Lease Payments	2016	FTIP	$29,439
20131102	VVTA	Commuter Bus Replacement	2015	FTIP	$4,000
20111808	VVTA	Inland Empire Vanpool Program - Victor Valley Phase Livability Grant	2015	FTIP	$1,864
20061704	VVTA	Jobs Access Reverse Commute (JARC) Various Projects to increase access to jobs for low income individuals, including voucher programs and vanpools	2015	FTIP	$1,282

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SBD41114	VVTA	Paratransit - Vehicle Replacement Alt Fuel	2014	FTIP	$3,543
20150101	VVTA	Paratransit Vehicle Expansion	2015	FTIP	$245
20111815	VVTA	Preventative Maintenance Operating Assistance	2014	FTIP	$12,306
20112006	VVTA	Purchase 3 Expansion 40' Buses Alt Fuel	2015	FTIP	$1,800
981104	VVTA	Transit - Security	2016	FTIP	$1,135
20111806	VVTA	Transit Bus Stop Access Improvements - Path of Travel for existing Bus Stop	2017	FTIP	$173
20110301	VVTA	Transit Operating Equipment - ITS Software/Hardware	2017	FTIP	$916
20150303	Yucaipa	Rehab Wildwwod Canyon Rd From Oakview to Oakgrove, and from 100 ft East & West of Oakgrove (non-capacity enhancing)	2015	FTIP	$500
2011157	Yucaipa	Widen Avenue E from Bryant St to 5th St from 2 to 4 lanes (Phased Project)	2015	FTIP	$3,174
4A07304	Yucaipa	Widen Bryant St from North Yucaipa City Limits to SR-38 from 2 to 4 lanes	2023	RTP	$568
2011155	Yucaipa	Widen Yucaipa Blvd from 15th St to I-10 Freeway from 4-6 lanes	2018	FTIP	$7,250
20150301	Yucca Valley	SR-62 Traffic Control Synchronization: 10 Traffic signals from SR-62/Sage Ave through SR-62/Yucca Mesa - La Cantenta Rd	2016	FTIP	$227
				Total	**$13,467,680**

FTIP	$7,547,981
RTP	$5,933,642
Total	**$13,481,623**

Appendix B

Aggressive Scenario Project Listing

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4A04406	Adelanto	Construct 4-lane Adelanto Rd from Chamberlaine Way to Colusa Rd	2040	RTP	$9,000
4A04409	Adelanto	Construct 4-lane Koala Rd from Palmdale Rd to Holly Rd	2040	RTP	$4,000
4120001	Adelanto	Widen Adelanto Rd from Holly to Chamberlaine Way from 2 to 4 lanes	2025	RTP	$12,000
4120008	Adelanto	Widen Air Expy from Jonathan Ave to Lessing Rd from 2 to 4 lanes	2035	RTP	$16,000
4120009	Adelanto	Widen Amethyst Rd from Holly Rd to Rancho Rd from 2 to 4 lanes	2040	RTP	$2,298
4120012	Adelanto	Widen Aster Rd from Palmdale to Oleander Rd from 0 to 4 lanes	2040	RTP	$15,000
4120018	Adelanto	Widen Bartlett Ave from Adelanto to Caughlin Rd from 2 to 4 lanes	2040	RTP	$12,000
4120023	Adelanto	Widen Beaver Rd from Palmdale to Oleander Rd from 0 to 4 lanes	2040	RTP	$11,000
4120026	Adelanto	Widen Bellflower St from Palmdale Rd to Calleja Rd from 0 to 4 lanes	2040	RTP	$11,000
4120028	Adelanto	Widen Cassia Rd from Adelanto Rd to US-395 from 2 to 4 lanes	2040	RTP	$539
4120030	Adelanto	Widen Caughlin Rd from Air Expressway to Bartlett Rd from 2 to 4 lanes	2040	RTP	$11,000
4120033	Adelanto	Widen Chamberlaine Way from Jonathan St to Caughlin Rd from 0 to 4 lanes	2040	RTP	$12,000
4120036	Adelanto	Widen Colbalt Rd from Holly to Rancho Rd from 2 to 4 lanes	2040	RTP	$1,865
4120039	Adelanto	Widen Colusa Rd from Mesa Linda Ave to Caughlin Rd from 0 to 4 lanes	2040	RTP	$11,000
4A01270	Adelanto	Widen El Mirage Rd from Adelanto Rd to LA County Line from 2 to 4 lanes	2040	RTP	$35,000
4120048	Adelanto	Widen Emerald Rd from Holly to Air Expressway from 2 to 4 lanes	2040	RTP	$4,671
4120051	Adelanto	Widen Holly Rd from US-395 to Aster Rd from 0/2 to 4 lanes	2040	RTP	$9,000
4120058	Adelanto	Widen Koala Rd from El Mirage Rd to Oleander St from 0 to 4 lanes	2040	RTP	$17,000
4A04410	Adelanto	Widen Koala Rd from Holly Rd to El Mirage Rd from 2 to 4 lanes	2040	RTP	$7,181
4120061	Adelanto	Widen Mojave Dr from US-395 to Lessing Rd from 0/2 to 4 lanes	2040	RTP	$15,000
4120067	Adelanto	Widen Palmdale Rd from Aster Rd to Richardson Rd from 0/2 to 4 lanes	2040	RTP	$10,131
4120066	Adelanto	Widen Palmdale Rd from Richardson to Lessing Rd from 0/2 to 4 lanes	2040	RTP	$9,915
4120065	Adelanto	Widen Palmdale Rd from US-395 to Aster Rd from 2 to 4 lanes	2040	RTP	$10,776
4120069	Adelanto	Widen Raccoon Ave from Palmdale Rd to Oleander St from 0 to 4 lanes	2040	RTP	$16,000
4120074	Adelanto	Widen Rancho Rd from Amethyst Rd to Richardson Rd from 0 to 4 lanes	2040	RTP	$18,000
4120083	Adelanto	Widen Seneca Rd from Aster Rd to Richardson Rd from 2 to 4 lanes	2040	RTP	$4,373
4120082	Adelanto	Widen Seneca Rd from US-395 to Daisy Rd from 2 to 4 lanes	2040	RTP	$3,202
4120094	Adelanto	Widen US-395 from Chamberlaine Way to Colusa Rd from 2 to 4 lanes	2040	RTP	$23,001
4120085	Adelanto	Widen Verbena Rd from Cactus Ave to Calleja Rd from 0/2 to 4 lanes	2040	RTP	$8,000
4120088	Adelanto	Widen Vinton Rd from Palmdale Rd to El Mirage from 0 to 4 lanes	2040	RTP	$14,000
4120095	Apple Valley	Widen Apple Valley Rd from Ohna Rd to Falchion Rd from 0 to 2 lanes	2025	RTP	$5,856
4A01008	Apple Valley	Widen Apple Valley Rd from SR-18 to Yucca Loma Rd from 2 to 4 lanes	2025	RTP	$26,500
4A01011	Apple Valley	Widen Bear Valley Rd from Apple Valley Rd to Navajo Rd from 4 to 6 lanes	2030	RTP	$6,900
4A07080	Apple Valley	Widen Bear Valley Rd from Navajo Rd to Joshua Rd from 2 to 4 lanes	2030	RTP	$4,505
4A07015	Apple Valley	Widen Central Rd from Bear Valley Rd to Waalew Rd from 2 to 4 lanes	2025	RTP	$14,400
4A07091	Apple Valley	Widen Central Rd from Roundup Way to n/ Poppy Rd from 2 to 4 lanes	2025	RTP	$4,050
4A01013	Apple Valley	Widen Corwin Rd from SR-18 to Dale Evans Pkwy from 2 to 4 lanes	2025	RTP	$14,400
4A07007	Apple Valley	Widen Dale Evans Pkwy from Thunderbird Rd to I-15 from 2 to 4 lanes	2030	RTP	$19,200
4A07063	Apple Valley	Widen Deep Creek Rd from Bear Valley Rd to Sitting Bull Rd from 0 to 4 lanes	2030	RTP	$5,200
4A07069	Apple Valley	Widen Deep Creek Rd from Tussing Rach Rd to Bear Valley Rd from 2 to 4 lanes	2030	RTP	$4,800
4A07010	Apple Valley	Widen Del Oro Rd from Appley Valley Rd to Central Rd from 0 to 2 lanes	2030	RTP	$16,800

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4A07161	Apple Valley	Widen Falchion Rd from Dale Evans Pkwy to Navajo Rd from 0 to 6 lanes	2030	RTP	$2,400
4A07006	Apple Valley	Widen Falchion Rd from I-15 to Dale Evans Pkwy from 0 to 4 lanes	2030	RTP	$20,000
4A07070	Apple Valley	Widen Kiowa Rd from Ocotillo Rd to Yucca Loma Rd from 2 to 4 lanes	2030	RTP	$9,600
4A07032	Apple Valley	Widen Rancherias Rd from Rincon Rd to Corwin Rd from 2 to 4 lanes	2030	RTP	$9,450
4A07058	Apple Valley	Widen Roundup Way from Kiowa Rd to Central Ave from 2 to 4 lanes	2025	RTP	$5,400
4A07026	Apple Valley	Widen Sitting Bull Rd from Apple Valley Rd to Navajo Rd from 2 to 4 lanes	2030	RTP	$10,800
4A01018	Apple Valley	Widen Thunderbird Rd from Rancherias Rd to Central Rd from 2 to 4 lanes	2025	RTP	$7,200
4A07029	Apple Valley	Widen Waalew Rd from Corwin Rd to Central Ave Rd from 2 to 4 lanes	2025	RTP	$10,000
4120097	Apple Valley	Widen Yucca Loma Rd from West town Limits to SR-18 from 2 to 4 lanes	2030	RTP	$8,108
4A04902	Caltrans	Construct Passing Lanes on SR-18 from 0.8 miles w/o Orchard Dr to 2.1 miles w/o Orchard Dr	2030	RTP	$14,092
4PL07026	Caltrans	Reconstruct Slopes on SR-189 and extend retaining wall on SR-18	2030	RTP	$7,346
4M07035	Caltrans	Widen SR-138 from SR-18 to Phelan Rd from 2 to 4 lanes (Phase II)	2030	RTP	$75,615
4A01900	Caltrans	Widen SR-18 from LA County Line to US-395 from 2 to 4 lanes	2030	RTP	$47,770
4M0802	Caltrans	Widen US-395 from SR-18 (Palmdale Rd) to Chamberlaine Way from 4 to 8 lanes	2019	RTP	$48,552
4A01031	Chino	Widen Chino Ave from SR-71 to East End Ave from 4 to 6 lanes	2035	RTP	$989
4A07133	Chino	Widen East End Ave from Chino Ave to Walnut Ave from 2 to 4 lanes	2030	RTP	$2,903
4A07146	Chino	Widen East End Ave from Philadelphia Ave to Phillips Blvd from 2 to 4 lanes	2030	RTP	$2,700
4A01032	Chino	Widen Edison Ave from Central Ave to Euclid Ave from 4 to 6 lanes	2025	RTP	$3,989
4A01063	Chino	Widen El Prado Rd from Central Ave to Pine Ave from 2 to 4 lanes	2025	RTP	$1,473
4120106	Chino	Widen Eucild Ave (SR-83) from Merril Ave to Kimball Ave from 2 to 4 lanes	2030	RTP	$1,227
4A04036	Chino	Widen Euclid Ave from Pine Ave to SR-71 from 2/4 to 8 lanes	2035	RTP	$11,500
4A04038	Chino	Widen Hellman Ave from Kimball Ave to Chino Corona Rd from 2 to 4 lanes	2025	RTP	$4,300
4A07052	Chino	Widen Kimball Ave from Euclid Ave to Hellman Ave from 2 to 4 lanes	2025	RTP	$5,900
4A01041	Chino	Widen Mountain Ave from Philadelphia St to Riverside Dr from 4 to 6 lanes	2025	RTP	$1,797
4120107	Chino	Widen Mountain Ave from Schaefer Ave to Edison Ave from 2 to 4 lanes	2025	RTP	$207
4A01042	Chino	Widen Philadelphia St from Central Ave to Benson Ave from 4 to 6 lanes	2025	RTP	$898
4A01043	Chino	Widen Philadelphia St from LA County Line to Central Ave from 2 to 4 lanes	2025	RTP	$2,935
4A07279	Chino	Widen Pipeline Ave from Riverside Dr to Walnut Ave from 2 to 4 lanes	2025	RTP	$1,025
4A07151	Chino	Widen Ramona Ave from Philadelphia Ave to Phillips Blvd from 2 to 4 lanes	2025	RTP	$2,633
4A01047	Chino	Widen Riverside Dr from Fern Ave to Euclid Ave from 2 to 6 lanes(Eastbound only)	2025	RTP	$777
4A01049	Chino	Widen Riverside Dr from Pipeline Ave to Fern Ave from 4 to 6 lanes	2025	RTP	$4,777
4120108	Chino	Widen Riverside Dr from West Chino City Limits to Reservior Ave from 4 to 6 lanes (WB Only)	2025	RTP	$664
4A01384	Chino	Widen SR-83 from Merrill Ave to Kimball Ave from 4 to 8 lanes	2029	RTP	$1,530
4160068	Colton	Construct Grade Separation for Valley Blvd @ SFRR	2030	RTP	$40,000
4120116	Colton	Realign Reche Canyon Rd from Washington St to Colton City Limits to 4 lane road	2025	RTP	$2,112
4A07226	Colton	Widen Agua Mansa Rd from Rancho Ave to 73 meters e/o Rancho Ave from 2 to 4 lanes	2030	RTP	$749
4120110	Colton	Widen Agua Mansa Rd from Rancho Ave to Riverside Ave from 2 to 4 lanes	2025	RTP	$3,322
4120112	Colton	Widen and extend Pepper Ave from I-10 to Slover Ave from 2 to 4 lanes	2030	RTP	$5,914
4A01066	Colton	Widen Barton Rd from South Colton City Limits to Washington St from 4 to 6 lanes	2025	RTP	$1,043
4120113	Colton	Widen C St from City Limits w/o Rancho Ave to Pennsylvania Ave from 2 to 4 lanes	2025	RTP	$1,296
4A07192	Colton	Widen C St from Jackson to Tejon Ave from 2 to 4 lanes	2030	RTP	$1,758

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4120111	Colton	Widen Colton Ave from Mt. Vernon Ave to City Limit from 2 to 4 lanes	2025	RTP	$3,409
4A04067	Colton	Widen Fairway Dr from Sperry Dr to Colton City Limits from 4 to 8 lanes	2025	RTP	$1,405
4120114	Colton	Widen La Cadena Dr from Palm Ave to Iowa Ave from 4 to 6 lanes	2030	RTP	$2,873
4120115	Colton	Widen La Cadena Dr from Rancho Ave to Litton Ave from 4 to 6 lanes	2030	RTP	$3,475
4160046	Colton	Widen Mt Vernon across UPRR and Santa Ana River from 2 to 4 lanes	2025	RTP	$30,000
4A07313	Colton	Widen Reche Canyon Rd from South Crystal Ridge to Riverside County Line from 2 to 4 lanes	2025	RTP	$2,570
4120117	Colton	Widen Riverside Ave from Riverside County Line to Santa Ana River from 4 to 6 lanes	2030	RTP	$8,791
4120118	Colton	Widen Riverside Ave from Santa Ana River to Agua Mansa Rd from 4 to 6 lanes	2030	RTP	$1,811
4120119	Colton	Widen San Bernardino Ave from County Limit to Rancho Ave from 2 to 4 lanes	2025	RTP	$155
4120120	Colton	Widen San Bernardino Ave from West Colton City Limits to County Limit from 2 to 4 lanes	2025	RTP	$1,867
4120121	Colton	Widen Slover Ave from Pepper Ave to Riverside Ave from 2 to 4 lanes	2025	RTP	$3,024
4A01082	Colton	Widen Valley Blvd from Sycamore Ave to Mt Vernon Ave from 4 to 6 lanes	2025	RTP	$4,015
4120122	Colton	Widen Washington St from Waterman Ave to I-215 from 4 to 6 lanes	2025	RTP	$5,640
4120123	Colton	Widen Washington St to from Aqueduct to La Cadena Dr from 0 to 2 lanes	2025	RTP	$4,136
4A07145	Fontana	Widen Banana Ave from Jurupa Ave to Slover Ave from 2 to 4 lanes	2025	RTP	$1,583
4A07083	Fontana	Widen Baseline Ave from Mango Ave to Maple Ave Widen from 2 to 6 lanes	2025	RTP	$4,200
4160028	Fontana	Widen Cherry from s/o I-15 to South Highland Ave from 2 to 6 lanes	2025	RTP	$4,000
4A01096	Fontana	Widen Citrus Ave from Slover Ave to Jurupa Ave from 2 to 4 lanes	2025	RTP	$4,200
4A04098	Fontana	Widen Cypress Ave from South Highland Ave to Sierra Lakes Pkwy from 0 to 4 lanes	2025	RTP	$10,000
4120131	Fontana	Widen Fontana Ave from Valley Blvd to Lime Ave from 2 to 4 lanes	2025	RTP	$1,136
4120236	Fontana	Widen Fontana Ave from Valley Blvd to Merrill Ave from 2 to 4 lanes	2025	RTP	$5,251
4A07187	Fontana	Widen Live Oak Ave from Arrow Route to Foothill Blvd from 2 to 4 lanes	2025	RTP	$1,688
4120133	Fontana	Widen Live Oak Ave from Jurupa Ave to Slover Ave from 2 to 4 lanes	2025	RTP	$2,625
4A04110	Fontana	Widen Live Oak Rd from Valley Blvd to Merrill Ave from 2 to 4 lanes	2025	RTP	$5,285
4A07045	Fontana	Widen Lytle Creek Rd from Summit Ave to Duncan Ave from 0 to 4 lanes	2025	RTP	$7,500
4120134	Fontana	Widen Poplar Ave from Slover Ave to Valley Blvd from 0 to 4 lanes (I-10 Overcrossing)	2030	RTP	$16,925
4A07084	Fontana	Widen San Sevaine Rd from Baseline Ave to Summit Ave from 2 to 4 lanes	2025	RTP	$4,200
4A07158	Fontana	Widen Santa Ana Ave from Mullberry Ave to Redwood Ave from 2 to 4 lanes	2030	RTP	$2,531
4A04122	Fontana	Widen Sierra Ave from San Bernardino Ave to Foothill Blvd from 4 to 6 lanes	2025	RTP	$19,600
4A07034	Fontana	Widen Sierra Lakes Pkwy from Cherry Ave to Catawba Ave Widen from 2 to 4 lanes	2025	RTP	$8,960
4A01285	Fontana	Widen Slover Ave from Alder Ave to Cactus Ave from 2 to 4 lanes	2025	RTP	$4,420
4A07259	Fontana	Widen Slover Ave from Tamarind Ave to East Fontana City Limits Widen from 4 to 6 lanes	2025	RTP	$840
4A07166	Fontana	Widen South Highland Ave from Sierra Ave to Palmetto Ave Widen from 2 to 4 lanes	2025	RTP	$2,100
4A07167	Fontana	Widen Summit Ave from Cherry Ave to San Sevaine Rd from 2 to 4 lanes	2025	RTP	$2,100
4A07077	Fontana	Widen Walnut Ave from I-15 to San Sevaine Rd from 2 to 4 lanes	2025	RTP	$4,480
4G04027	Grand Terrace	Construct Grade Separation at Main St in Grand Terrace on the San Bernardino Line	2030	RTP	$18,100
4120140	Grand Terrace	Widen Michigan St from Commerce Way and Van Buren St from 2 to 4 lanes	2025	RTP	$742
4A07129	Hesperia	Construct Grade Separation connection to Main St	2035	RTP	$4,500
4160032	Hesperia	Construct Grade Separation for Eucalyptus St @ SFRR	2035	RTP	$8,546

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
201104	Hesperia	Lemon St/Mauna Loa St - new RR Grade Separation that includes construction of a new 6 lane overcrossing and realignment and reconstruction of Lemon St and Mauna Loa St from 3rd Ave to just West of E Ave	2021	FTIP	$47,900
4A01152	Hesperia	Widen Hesperia Rd from Bear Valley Rd to Sultana St from 2 to 4 lanes	2030	RTP	$9,200
4160037	Hesperia	Widen I Ave from Main St to Bear Valley Rd from 2 to 4 lanes	2025	RTP	$7,700
200211	Hesperia	Widen I Ave from Main St to Bear Valley Rd from 2 to 4 lanes	2035	RTP	$7,700
SBD031284	Hesperia	Widen I Ave from Ranchero Rd to Main St from 2 to 4 lanes	2035	RTP	$7,610
4A01155	Hesperia	Widen Lemon St from 3rd Ave to I Ave from 2 to 4 lanes and construct Grade Separation at BNSF RR w/ Regional Storm Drain	2040	RTP	$20,000
4A01157	Hesperia	Widen Main St from US-395 to I-15 from 4 to 6 lanes	2040	RTP	$17,950
4A01159	Hesperia	Widen Maple Ave from Eucalyptus Ave to Main St from 2 to 5 lanes	2038	RTP	$5,280
4A01162	Hesperia	Widen Mauna Loa Rd from 7th Ave to 3rd Ave from 2 to 4 lanes and connect to Lemon St	2035	RTP	$2,500
SBD55028	Hesperia	Widen Ranchero Rd from Danbury to Arrowhead Lake Rd from 2 to 4 lanes	2035	RTP	$11,000
4A01168	Hesperia	Widen Rock Springs Rd from Glendale Ave to East Hesperia City Limits from 2 to 4 lanes	2027	RTP	$1,500
4A07231	Highland	Construct new 2-lane road on Lankershim Ave from 660' n/o Base Line Rd to 1200' n/o 9th St	2032	RTP	$1,238
4A07150	Highland	Construct new street for Cone Camp Rd from Greenspot Rd to South Highland City Limit from 0 to 2 lanes	2035	RTP	$2,774
4A07019	Highland	Construct new street, branch off from Greenspot Rd to connect to SR-38 from 0 to 2/4 lanes within City Limit including bridge over Mill Creek	2025	RTP	$52,000
4M0801	Highland	SR-210 @ Victoria Ave - Construct new interchange	2040	RTP	$93,000
4A07136	Highland	Widen Highland Ave from Church St to Boulder Ave from 2 to 4 lanes	2025	RTP	$3,131
4A07275	Highland	Widen Pacific St from 2 lots w/o Cole Ave to Palm Ave from 2 to 4 lanes	2030	RTP	$966
4160024	Loma Linda	Construct Grade Separation for Beaumont Ave @ UPRR	2030	RTP	$25,000
4A07196	Loma Linda	Construct new 2 lane road on Van Leuven Ave from Evans St to Orange Grove St	2030	RTP	$1,600
4A07002	Loma Linda	Construct new 4-lane road on Evans St from UPRR to Barton Rd	2030	RTP	$32,150
4120144	Loma Linda	Widen Evans St from I-10 to Barton Rd from 0 to 4 lanes	2040	RTP	$77,647
4A01267	Montclair	Widen Central Ave from Montclair City Limit to Chino City Limit from 4 to 6 lanes	2035	RTP	$1,407
4G07421	Montclair	Widen Central Ave grade separation on the Alhambra and Los Angeles Lines from 4 to 6 lanes	2035	RTP	$5,930
4A01183	Montclair	Widen Monte Vista Ave from San Bernardino St to Arrow Hwy from 4 to 6 lanes	2025	RTP	$3,872
4A01184	Montclair	Widen San Bernardino St from LA County Line to Benson Ave from 4 to 6 lanes	2025	RTP	$4,776
4160062	Omnitrans	Downtown Transit Center enhancements - Additional 7,000 sf building	2021	RTP	$7,500
4160047	Omnitrans	Implement regionally compatible smart fare media system	2019	RTP	$3,000
4160059	Omnitrans	Implement rooftop solar at Omnitrans operations and maintenance facilities in Montclair and San Bernardino and at the Downtown San Bernardino Transit Center at E St and Rialto	2019	RTP	$5,000
4160043	Omnitrans	Vehicle storage and maintenance facility for Access/BRT vehicles	2020	RTP	$5,000
4120213	OmniTrans	West Valley Connector BRT from Pomona Metrolink Station to Sierra Ave	2025	RTP	$242,000
4A07208	Ontario	Construct bridge on Francis St over Cucamonga Creek-sidewalk only	2025	RTP	$903
4160061	Ontario	Construct Grade Separation on San Antonio Ave at UPRR (Alhambra and Los Angeles Line)	2035	RTP	$24,000
4G0103/ 4G0109	Ontario	Contruct 4-lane grade separation on San Antonio Ave at Alhambra/Los Angeles Line	2035	RTP	$24,000
4160010	Ontario	SR-60 @ Vineyard Ave interchange reconstruction	2040	RTP	$51,000

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4A07326	Ontario	Widen 1-lane bridge on Archibald Ave over Lower Deer Creek to 6 lanes	2025	RTP	$179
4A07174	Ontario	Widen 2-lane bridge on Eight St over Cucamonga Creek to 4 lanes	2035	RTP	$927
4A07278	Ontario	Widen 4-lane bridge on Archibald Ave over Upper Deer Creek Spillway to 6 lanes	2025	RTP	$848
4A07277	Ontario	Widen 4-lane bridge on Archibald Ave over Upper Deer Creek to 6 lanes	2025	RTP	$606
4A07327	Ontario	Widen 4-lane bridge on Holt Blvd over Cucamonga Creek to 6 lanes	2025	RTP	$1,346
4160019	Ontario	Widen 8th St from West Cucamonga Channel to Grove Ave from 2 to 4 lanes	2035	RTP	$156
4160020	Ontario	Widen Acacia St from Baker Ave to Vineyard Ave from 2 to 4 lanes	2035	RTP	$70
4120145	Ontario	Widen Airport Dr from Rochester Ave to Etiwanda Ave from 2 to 4 lanes	2025	RTP	$5,270
4A04189	Ontario	Widen Archibald Ave from Edison Ave to South Ontario City Limits from 2 to 6 lanes	2025	RTP	$7,189
4160023	Ontario	Widen Archibald Ave from Inland Empire Blvd to 4th St from 4 to 6 lanes	2035	RTP	$1,921
4A04190	Ontario	Widen Archibald Ave from Riverside Ave to Edison Ave from 2 to 6 lanes	2025	RTP	$6,686
4160025	Ontario	Widen Bon View Ave from Mission Blvd to Belmont Ave from 2 to 4 lanes	2035	RTP	$636
4A07325	Ontario	Widen bridge on Holt Blvd over West Cucamonga Creek from 4 to 6 lanes	2025	RTP	$120
4A07317	Ontario	Widen bridge on Mission Blvd over Cucamonga Creek from 4 to 6 lanes	2025	RTP	$988
4A07215	Ontario	Widen bridge on Mission Blvd over West Cucamonga Creek from 4 to 6 lanes	2025	RTP	$337
4A07267	Ontario	Widen bridge on Riverside Dr over Cucamonga Creek from 4 to 6 lanes	2035	RTP	$526
4A04193	Ontario	Widen Campus Ave from Riverside Dr to Merrill Ave from 2 to 4 lanes	2025	RTP	$5,016
4160026	Ontario	Widen Campus Ave from Woodlawn St to Mission Blvd from 2 to 4 lanes	2035	RTP	$1,130
4A04197	Ontario	Widen Edison Ave from Euclid Ave to Walker Ave from 2 to 8 lanes	2025	RTP	$8,268
4A04196	Ontario	Widen Edison Ave from Mill Creek Ave to Milliken Ave from 2 to 8 lanes	2025	RTP	$3,177
4A04198	Ontario	Widen Edison Ave from Vineyard Ave to Mill Creek Ave from 2 to 8 lanes	2025	RTP	$20,727
4A04199	Ontario	Widen Edison Ave from Walker to Vineyard Ave from 2 to 8 lanes	2025	RTP	$3,042
4A04200	Ontario	Widen Eucalyptus Ave from Euclid Ave to Milliken Ave (Hamner Ave) from 2 to 4 lanes	2035	RTP	$2,675
4A04201	Ontario	Widen Euclid Ave from Riverside Dr to Merrill Ave from 2 to 4 lanes (NB only)	2035	RTP	$10,999
SBD59004	Ontario	Widen Francis St from Bon View Ave to Grove from 2 to 4 lanes (storm drain from Bon View to Parco)	2035	RTP	$9,600
4G0104/ 4G0112	Ontario	Widen grade separation @ UPRR Alhambra/Los Angeles Lines from 2 to 4 lanes	2032	RTP	$24,000
4A04206	Ontario	Widen Grove Ave from Riverside Dr to Merrill Ave from 2 to 4 lanes	2035	RTP	$8,192
4160035	Ontario	Widen Guasti Rd from Holt Blvd to Archibald Ave from 2 to 4 lanes	2035	RTP	$932
4A04208	Ontario	Widen Haven Ave from Riverside Dr to Bellegrave Ave from 2 to 4 lanes	2035	RTP	$3,512
4A04214	Ontario	Widen Mill Creek Ave from Riverside Dr to Bellgrave Ave 2-4 lanes	2025	RTP	$3,512
4A04215	Ontario	Widen Milliken Ave (Hamner Ave) from Edison Ave to South Ontario City Limits from 2 to 3 lanes (SB Only)	2025	RTP	$1,672
4A04216	Ontario	Widen Milliken Ave (Hamner Ave) from Riverside Ave to Edison Ave from 1 to 4 lanes (SB Only)	2025	RTP	$4,012
4160044	Ontario	Widen Milliken/Hamner Ave from SR-60 to Riverside Dr from 4 to 6 lanes	2035	RTP	$381
4A04218	Ontario	Widen Ontario/Hellman Ave from Riverside Dr to Bellgrave from 0 to 2/4 lanes	2030	RTP	$4,346
4A07266	Ontario	Widen Philadelphia St from Campus Ave to 750' e/o Grove Ave from 2 to 4 lanes	2030	RTP	$817
4160050	Ontario	Widen Phillips St from Benson Ave to Mountain Ave from 2 to 4 lanes	2035	RTP	$802
4A04219	Ontario	Widen Riverside Dr from Euclid Ave to Milliken Ave from 2 to 4 lanes	2030	RTP	$4,793
4160060	Ontario	Widen San Antonio Ave from Park St to Phillips St from 2 to 4 lanes	2035	RTP	$1,746
4A04220	Ontario	Widen Schaefer Ave from Euclid Ave to Haven Ave from 0 to 4 lanes	2030	RTP	$3,760

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4160063	Ontario	Widen State St from Bon View Ave to Grove Ave from 2 to 4 lanes	2035	RTP	$870
4160066	Ontario	Widen Turner Ave from Inland Empire Blvd to 4th St from 2 to 4 lanes in southbound direction only	2035	RTP	$714
4A01222	Ontario	Widen Vineyard Ave from 4th St to I-10 from 4 to 6 lanes	2025	RTP	$1,206
4A04223	Ontario	Widen Vineyard Ave from Riverside Dr to Merill Ave from 0 to 6 lanes	2025	RTP	$5,850
4160070	Ontario	Widen Walker Ave from Riverside Dr to Merrill Ave from 2 to 4 lanes	2035	RTP	$4,346
201134	Rancho Cucamonga	Construct Grade Separation for Etiwanda Ave @ SCRRA tracks	2025	RTP	$54,050
4120172	Rancho Cucamonga	Construct new 4-lane bridge at Wilson and Day Creek Channel	2025	RTP	$1,766
201138	Rancho Cucamonga	Construct new 4-lane divided Youngs Canyon Rd from San Sevaine to Cherry Ave	2026	RTP	$1,700
200152	Rancho Cucamonga	I-15 @ Arrow Route - Construct new interchange between Arrow Route and Foothill Blvd	2040	RTP	$91,370
4120153	Rancho Cucamonga	Widen 6th St at Cucamonga Creek Channel from 2 to 4 lanes	2025	RTP	$440
4120157	Rancho Cucamonga	Widen Arrow Rte at Etiwanda Ditch from 2 to 4 lanes	2025	RTP	$884
20020134	Rancho Cucamonga	Widen Arrow Rte from Etiwanda Ave to east city limit from 2 to 4 lanes	2035	RTP	$1,100
4120163	Rancho Cucamonga	Widen Arrow Rte from Grove St to Baker St from 2 to 4 lanes	2025	RTP	$1,550
4120155	Rancho Cucamonga	Widen Baseline Rd from Etiwanda Ave to I-15 from 4 to 6 lanes	2025	RTP	$585
200023	Rancho Cucamonga	Widen Cherry Ave from south city limits to Wilson Ave from 2 to 4 lanes	2035	RTP	$830
4120165	Rancho Cucamonga	Widen Church Ave from Archibald Ave to Haven Ave from 2 to 4 lanes	2025	RTP	$1,802
4120156	Rancho Cucamonga	Widen East Ave from Chateau Dr to Victoria Ave from 2 to 4 lanes	2025	RTP	$628
4120148	Rancho Cucamonga	Widen East St from Wilson Ave to North Rim Way (new) from 2 to 4 lanes	2025	RTP	$246
4120152	Rancho Cucamonga	Widen Etiwanda Ave from Miller Ave to 850' n/o Miller Ave, NB only from 3 to 4 lanes	2025	RTP	$363
4120169	Rancho Cucamonga	Widen Etiwanda Ave from 6th St to Arrow Route from 2 to 4 lanes	2025	RTP	$5,060
4120164	Rancho Cucamonga	Widen Etiwanda Ave from Banyan Rd to Wilson Ave from 2 to 4 lanes	2025	RTP	$1,676
4120149	Rancho Cucamonga	Widen Etiwanda Ave from existing terminus to North Rim Way (new) from 0 to 2 lanes	2025	RTP	$333
4120166	Rancho Cucamonga	Widen Foothill Blvd from Archibald Ave to Hermosa Ave from 4 to 6 lanes	2025	RTP	$2,236
4120168	Rancho Cucamonga	Widen Foothill Blvd from Vineyard Ave to Archibald Ave from 4 to 6 lanes	2025	RTP	$3,534
4160034	Rancho Cucamonga	Widen Grove from San Bernardino Ave to Foothill Blvd from 1 to 2 lanes (east side only)	2025	RTP	$714
4120158	Rancho Cucamonga	Widen Hellman Ave at Cucamonga Creek Channel from 2 to 4 lanes	2025	RTP	$884
4120167	Rancho Cucamonga	Widen Miller Rd from Etiwanda Ave to East St from 2 to 4 lanes	2025	RTP	$1,956
4M07034	Rancho Cucamonga	Widen northbound on-ramp to 2 lanes to the metering point, transition to 1 lane at the gore & install ramp metering	2025	RTP	$1,050
4120151	Rancho Cucamonga	Widen Victoria Ave from Etiwanda High School to I-15 from 2 to 4 lanes	2025	RTP	$344
4120171	Rancho Cucamonga	Widen Wilson Ave from Milliken Ave to Day Creek Blvd from 0 to 4 lanes	2025	RTP	$7,067
4A01262B	Redlands	Widen 5th Ave from Crafton Ave to Wabash Ave from 2 to 4 lanes	2025	RTP	$3,387
4A01237	Redlands	Widen Alabama St from 3rd St to San Bernardino Ave from 2 to 4 lanes at Santa Ana River	2025	RTP	$7,150
4A07017	Redlands	Widen Alabama St from Lugonia Ave to Barton Rd from 4 to 6 lanes	2025	RTP	$17,408
4A07042	Redlands	Widen Alabama St from North Redlands City Limits to Palmetto Ave from 2 to 4 lanes	2025	RTP	$7,700
4A07184	Redlands	Widen California St from Redlands Blvd to Palmetto Ave from 5 to 6 lanes (add NB lane for 3 lanes in each direction)	2025	RTP	$45,000
4A01239	Redlands	Widen Church St from Colton Ave to Redlands Blvd from 2 to 4 lanes	2025	RTP	$4,150
SBD58044	Redlands	Widen Citrus Ave Auburn Ct to Wabash Ave from 2 to 4 lanes	2035	RTP	$525
4A04240	Redlands	Widen Citrus Ave from Dearborn St to Wabash Ave from 2 to 4 lanes	2025	RTP	$1,149
4120173	Redlands	Widen Colton Ave from Wabash Ave to Crafton Ave from 2 to 4 lanes	2025	RTP	$2,358

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4120237	Redlands	Widen Crafton Hills Pkwy from Wabash Ave to East Redlands City Limits from 0 to 2 lanes	2025	RTP	$6,875
4A01241	Redlands	Widen Cypress Ave from I-10 to Citrus Av from 2 to 4 lanes	2025	RTP	$750
4A01243	Redlands	Widen Ford St from 5th Ave to I-10 from 2 to 4 lanes	2025	RTP	$1,999
4A07295	Redlands	Widen Greenspot Rd from 0.19 m n/o Florida St to Florida St from 2 to 4 lanes	2035	RTP	$431
4A07261	Redlands	Widen Highland Ave from Cajon St to Ford St from 2 to 4 lanes	2035	RTP	$4,000
4A01245	Redlands	Widen Live Oak Cyn Rd from San Timoteo Cyn Rd to East Redlands City Limits from 2 to 4 lanes	2025	RTP	$5,829
4A07255	Redlands	Widen Lugonia Ave from California St to Tennesee St from 2 to 4 lanes	2035	RTP	$3,300
4A01246	Redlands	Widen Lugonia Ave from Tenessee St to Orange St from 2 to 4 lanes	2025	RTP	$3,355
4120175	Redlands	Widen Mountain View Ave from Lugonia Ave to San Bernardino Ave from 1 to 2 lanes (NB only)	2025	RTP	$501
4A07112	Redlands	Widen Nevada St from Lugonia Ave to Palmetto Ave from 2 to 4 lanes	2025	RTP	$3,375
200420	Redlands	Widen Orange St from north city limits to Riverview Dr from 2 to 4 lanes	2035	RTP	$540
4A07154	Redlands	Widen Palmetto Ave from California St to Alabama St from 2 to 4 lanes	2025	RTP	$2,565
4A01249	Redlands	Widen Redlands Blvd from West Redlands City Limits to Colton Ave from 4 to 6 lanes and widen intersection at Colton Ave	2025	RTP	$12,356
4A01281	Redlands	Widen San Bernardino Ave from Alabama St to California St from 2 to 4 lanes	2025	RTP	$5,050
4A01250	Redlands	Widen San Bernardino Ave from Church St to Wabash Ave from 2 to 4 lanes	2025	RTP	$2,665
4120179	Redlands	Widen San Bernardino Ave from SR-210 to Orange St from 2 to 4 lanes	2025	RTP	$1,915
4A01254	Redlands	Widen San Timoteo Cyn Rd from RR Crossing to Live Oak Cyn Rd from 2 to 4 lanes	2035	RTP	$6,895
4A07253	Redlands	Widen Wabash Ave from Colton Ave to San Bernardino Ave from 2 to 4 lanes	2025	RTP	$2,068
4A07381	Redlands	Widen Wabash Ave from Redlands City Limits to I-10 from 2 to 4 lanes	2025	RTP	$101
4160058	Rialto	Construct Grade Separation for Riverside Ave @ UPRR and widen bridge from 5 to 7 lanes	2030	RTP	$37,575
4120181	Rialto	Widen Alder Ave from Baseline Rd to Renaissance Pkwy from 2 to 4 lanes	2025	RTP	$1,800
4120183	Rialto	Widen Casmalia Ave from 0.3 miles e/o Sierra Ave to Ayala Dr from 2 to 4 lanes	2025	RTP	$4,600
4160027	Rialto	Widen Cedar Ave from Randall Ave to Baseline Rd from 4 to 6 lanes	2025	RTP	$5,020
4120184	Rialto	Widen Linden Ave from Baseline Ave to Miro Way from 2 to 4 lanes	2025	RTP	$500
4160039	Rialto	Widen Linden Ave from Miro Way to Renaissance Pkwy from 0 to 4 lanes	2025	RTP	$2,880
4120185	Rialto	Widen Locust Ave from Baseline Ave to Miro Way from 2 to 4 lanes	2025	RTP	$500
4160040	Rialto	Widen Locust Ave from Miro Way to Renaissance Pkwy from 0 to 4 lanes	2025	RTP	$2,640
4160041	Rialto	Widen Merrill Ave from 0.11 m e/o Cactus Ave to Lilac Ave from 3 to 4 lanes (Add 1 WB lane)	2030	RTP	$140
4A07120	Rialto	Widen Merrill Ave from Linden Ave to 0.12 miles e/o Linden Ave from 3 to 4 lanes	2030	RTP	$120
4120231	Rialto	Widen Randall Ave from Linden Ave to Riverside Ave from 2 to 4 lanes	2025	RTP	$3,400
4120180	Rialto	Widen Renaissance Pkwy from Alder Ave to Ayala Dr from 2 to 4 lanes	2025	RTP	$1,550
4A07199	Rialto	Widen Rialto Ave from Olive Ave to Sycamore Ave from 2 to 4 lanes	2025	RTP	$340
4160054	Rialto	Widen Rialto Ave from Sycamore Ave to Eucalyptus Ave from 2 to 4 lanes	2025	RTP	$1,000
4A01259	Rialto	Widen Riverside Ave from 0.25 miles s/o Valley Blvd to Slover Ave from 2 to 3 lanes (SB only)	2025	RTP	$260
4160056	Rialto	Widen Riverside Ave from 0.35 m s/o Sierra Ave to Alder Ave from 4 to 6 lanes	2030	RTP	$2,120
4A01258	Rialto	Widen Riverside Ave from Agua Mansa Rd to Slover Ave from 4 to 6 lanes	2030	RTP	$3,460
4160055	Rialto	Widen Riverside Ave from Foothill Blvd to Easton St from 4 to 6 lanes	2025	RTP	$3,760
4120187	Rialto	Widen Riverside Ave from Gateway Plaza to San Bernardino Ave from 4 to 6 lanes	2025	RTP	$660
4A07237	Rialto	Widen Riverside Ave from Locust Ave to 0.1 miles s/o Cedar Ave from 3 to 6 lanes	2030	RTP	$3,150
4160057	Rialto	Widen Riverside Ave from San Bernardino Ave to Rialto Ave from 4 to 6 lanes	2025	RTP	$2,900

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4120188	Rialto	Widen Riverside Ave from Sierra Ave to 0.35 miles s/o Sierra Ave from 2 to 6 lanes	2030	RTP	$1,400
4A07101	Rialto	Widen San Bernardino Ave from Lilac Ave to Sycamore Ave from 2 to 4 lanes	2030	RTP	$1,520
4A07003	San Bernardino, City	Replace I-10 Bridge to Widen Waterman Ave from Hospitality Ln to Redlands Blvd from 4 to 6 Lanes	2030	RTP	$30,000
4A07230	San Bernardino, City	Widen 5th St from Pedley Rd to Tippecanoe Ave from 2 to 4 lanes	2025	RTP	$1,181
4A07292	San Bernardino, City	Widen 5th St from Warm Creek to Pedley Ave from 2 to 4 lanes	2030	RTP	$1,148
4A07081	San Bernardino, City	Widen Coulston Ave from Tippecanoe Ave to Mountain View Ave from 2 to 4 lanes	2030	RTP	$4,224
4A07380	San Bernardino, City	Widen Del Rosa Ave from Del Rosa Dr to San Bernardino City Limits from 2 to 4 lanes	2025	RTP	$90
4A07094	San Bernardino, City	Widen Electric Ave from Mt View Ave to Northpark Blvd from 2 to 4 lanes	2030	RTP	$3,840
4A07176	San Bernardino, City	Widen G St from Mill St to Rialto Ave from 2 to 4 lanes	2030	RTP	$2,299
4A07177	San Bernardino, City	Widen Little League Dr from Kendall Dr to Belmont Ave from 2 to 4 lanes	2030	RTP	$5,000
4A07243	San Bernardino, City	Widen Mill St from Pepper Ave to Meridian Ave from 2 to 4 lanes	2030	RTP	$960
4120190	San Bernardino, City	Widen Mt View Ave from Coulston Ave to Mission Creek Channel (Zanja) from 2 to 4 lanes (SB only)	2025	RTP	$345
4A07264	San Bernardino, City	Widen Mt View Ave from Thompson Pl to Electric Ave from 2 to 4 lanes	2030	RTP	$768
4A07247	San Bernardino, City	Widen Palm Ave from Cajon Blvd to I-215 from 2 to 4 lanes	2025	RTP	$912
4A07198	San Bernardino, City	Widen Perris Hill Park Rd from 21st St to Pacific St from 2 to 4 lanes	2025	RTP	$1,839
4A07244	San Bernardino, City	Widen Pine Ave from Kendall Dr to Belmont Ave from 2 to 4 lanes	2035	RTP	$960
4A07148	San Bernardino, City	Widen Rancho Rd from Colton City Limits to 5th St from 2 to 4 lanes	2025	RTP	$3,218
4A07135	San Bernardino, City	Widen Rialto Ave from Lena Rd to Tippecanoe Ave from 2 to 4 lanes	2030	RTP	$2,880
4A07178	San Bernardino, City	Widen Rialto Ave from Sierra Way to Waterman Ave from 2 to 4 lanes	2025	RTP	$2,299
4120191	San Bernardino, City	Widen State St from Hanford St to n/o Cajon Blvd from 2 to 4 lanes	2035	RTP	$6,000
4A07152	San Bernardino, City	Widen Tippecanoe Ave from Mill St to Harriman from 4 to 6 lanes	2030	RTP	$25,000
4A01292	San Bernardino, City	Widen Waterman Ave from 5th St to Baseline Ave from 4 to 6 lanes	2030	RTP	$6,912
4160069	San Bernardino, County	Construct Grade Separation for Vista Rd @ SFRR	2035	RTP	$31,000
4AL04	San Bernardino, County	Countywide Arterial Improvements	2035	RTP	$1,340,714
4G0167	San Bernardino, County	Extend Shadow Mountain Rd and construct 4-lane road including bridge over Mojave River and grade separation over RR from Helendale Rd to National Trails Hwy	2025	RTP	$50,000
4M01032	San Bernardino, County	I-10 @ Wabash Ave interchange improvements	2040	RTP	$40,000
4A07130	San Bernardino, County	Intersection Improvements for Daley Canyon Rd @ SR-18	2025	RTP	$3,000
4160013	San Bernardino, County	Operational improvements on SR-62 from East Yucca Valley Town Limits to West Twentynine Palms City Limits	2035	RTP	$527
4A07131	San Bernardino, County	Pave dirt road Midway Ave from SR-19 to SR-247 as 2-lane road	2025	RTP	$3,000
4G07420	San Bernardino, County	Replace Grade Separation and widen underpass at National Trails Hwy and Oro Grande Grade Separation from 2 to 4 lanes	2025	RTP	$29,000
4120192	San Bernardino, County	Various ITS Projects Throughout San Bernardino County	2035	RTP	$471,291
4A07349	San Bernardino, County	Widen Alder Ave from Taylor St to Valley Blvd from 2 to 4 lanes	2025	RTP	$217
4A07251	San Bernardino, County	Widen Alder Ave from Valley Blvd to San Bernardino Ave from 2 to 4 lanes	2025	RTP	$406
4A07294	San Bernardino, County	Widen Benson Ave from Howard St to State St from 2 to 4 lanes	2025	RTP	$519
4A07298	San Bernardino, County	Widen Benson Ave from Phillips Blvd to Howard St from 2 to 4 lanes	2025	RTP	$577
4A07143	San Bernardino, County	Widen Calabash Ave from Whittram Ave to Foothill Blvd from 2 to 4 lanes	2025	RTP	$1,740
4A07238	San Bernardino, County	Widen Crafton Hills Pkwy from South Redlands City Limits to Crafton Hills from 0 to 2 lanes	2035	RTP	$6,329
4A07333	San Bernardino, County	Widen East End Ave from Phillips Blvd to Grand Ave from 2 to 4 lanes	2030	RTP	$309

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4A07099	San Bernardino, County	Widen El Evado Rd from Air Expressway to Hopland Dr from 0 to 4 lanes	2035	RTP	$7,200
4A07162	San Bernardino, County	Widen Florida St from Greenspot Rd to Garnet St from 2 to 4 lanes	2025	RTP	$409
4A07352	San Bernardino, County	Widen Garnet St from 0.08 miles s/o Mentone Ave to Mentone Ave from 2 to 4 lanes	2035	RTP	$429
4A07320	San Bernardino, County	Widen Garnet St from Mentone Ave to SR-38 from 2 to 4 lanes	2035	RTP	$430
4A07169	San Bernardino, County	Widen Garnet St from Newport Ave to Florida St from 2 to 4 lanes	2035	RTP	$3,162
4A07314	San Bernardino, County	Widen Garnet St from SR-38 to Newport Ave from 2 to 4 lanes	2035	RTP	$383
4A07111	San Bernardino, County	Widen Jurupa Ave from Cedar Ave to Lilac Ave from 2 to 4 lanes	2025	RTP	$561
4A07315	San Bernardino, County	Widen Locust Ave from 7th St to 11th St from 2 to 4 lanes	2035	RTP	$545
4A07183	San Bernardino, County	Widen Locust Ave from Jurupa Ave to Santa Ana Ave from 2 to 4 lanes	2035	RTP	$2,056
4A07188	San Bernardino, County	Widen Locust Ave from San Bernardino Ave to Randall Ave from 2 to 4 lanes	2035	RTP	$1,707
4A07193	San Bernardino, County	Widen Locust Ave from Santa Ana Ave to Slover Ave from 2 to 4 lanes	2035	RTP	$1,648
4A07189	San Bernardino, County	Widen Locust Ave from Valley Blvd to San Bernardino Ave from 2 to 4 lanes	2035	RTP	$1,403
4A07182	San Bernardino, County	Widen Mission Blvd from Central to Benson Ave from 4 to 6 lanes	2025	RTP	$1,498
4A01276	San Bernardino, County	Widen Mission Blvd from LA County Line to Pipe Line Ave from 2 to 6 lanes	2025	RTP	$1,014
4A07202	San Bernardino, County	Widen Monte Vista Ave from Phillips Blvd to State St from 2 to 4 lanes	2025	RTP	$836
4A04401	San Bernardino, County	Widen Mulberry Ave from Jurupa Ave to Slover Ave from 2 to 4 lanes	2025	RTP	$580
4A04115	San Bernardino, County	Widen Mulberry Ave from Valley Blvd to San Bernardino Ave from 2 to 4 lanes	2025	RTP	$964
4A07197	San Bernardino, County	Widen Olive St from Jackson St to Rancho Ave from 2 to 4 lanes	2025	RTP	$1,553
4A07252	San Bernardino, County	Widen Phillips Blvd from East End Ave to Roswell Ave from 2 to 4 lanes	2025	RTP	$379
4A07390	San Bernardino, County	Widen Phillips Blvd from LA County Line to East End Ave from 2 to 4 lanes	2025	RTP	$100
4A07124	San Bernardino, County	Widen Phillips Blvd from Roswell Ave to Yorba Ave from 2 to 4 lanes	2025	RTP	$3,026
4A07107	San Bernardino, County	Widen Phillips Blvd from Yorba Ave to Benson Ave from 2 to 4 lanes	2025	RTP	$3,829
4120233	San Bernardino, County	Widen Pipeline Ave from 0.04 miles s/o Philadelphia Ave to Phillips Blvd from 2 to 4 lanes	2025	RTP	$3,204
4A07216	San Bernardino, County	Widen Pipeline Ave from Chino Ave to Riverside Dr from 2 to 4 lanes	2025	RTP	$1,101
4A07061	San Bernardino, County	Widen Randall Ave from Cherry Ave to Poplar Ave from 2 to 4 lanes	2025	RTP	$2,790
200816	San Bernardino, County	Widen Rock Springs Rd from Glendale Ave to Deep Creek Rd from 2 to 4 lanes (including bridge)	2020	FTIP	$21,233
200816	San Bernardino, County	Widen Rock Springs Rd from Glendale Ave to Kiowa Rd (0.76 miles) from 2 to 4 lanes	2025	RTP	$21,233
4A07033	San Bernardino, County	Widen San Bernardino Ave from Alder Ave to Laurel Ave from 2 to 4 lanes	2025	RTP	$524
4A07240	San Bernardino, County	Widen San Bernardino Ave from Wabash Ave to Opal Ave from 2 to 4 lanes	2025	RTP	$778
4120136	San Bernardino, County	Widen Santa Ana Ave from Mullberry Ave to Almond Ave from 2 to 4 lanes	2030	RTP	$3,660
4A07153	San Bernardino, County	Widen Santa Ana Ave from Tamarind Ave to Locust Ave from 2 to 4 lanes	2030	RTP	$2,551
4160018	San Bernardino, County	Widen SR-247 from North Yucca Valley Town Limits to Reche Rd from 2 to 4 lanes	2040	RTP	$16,300
4160015	San Bernardino, County	Widen SR-62 from Riverside County Line to Yucca Valley Town Limits from 4 to 6 lanes	2030	RTP	$30,689
4A07097	San Bernardino, County	Widen Summit Valley Rd from SR-138 to Ranchero Rd from 2 to 4 lanes	2035	RTP	$21,000
20040210	San Bernardino, County	Widen Summit Valley Road from SH138 to Ranchero Rd from 2 to 4 lanes	2018	FTIP	$21,000
4A07013	San Bernardino, County	Widen Sunburn Ave from SR-62 to Crestview Dr from 2 to 4 lanes; adjust vertical Profile safety	2030	RTP	$15,000
4A07284	San Bernardino, County	Widen Valley Blvd from Cherry Ave to Hemlock Ave from 4 to 6 lanes	2025	RTP	$633
4A07363	San Bernardino, County	Widen Walnut Ave from 0.10 miles s/o Roswell Ave to Roswell Ave from 2 to 4 lanes	2035	RTP	$357
4160048	SANBAG	Direct Shuttle bus connection from Rancho Cucamonga Metrolink Station to Ontario Airport	2020	RTP	$4,000
4122002	SANBAG	Double tracking of Metrolink San Bernarino Line between CP Central and CP Archibald in San Bernardino County	2030	RTP	$94,500

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4160042	SANBAG	Double tracking of remaining single track segments of Metrolink San Bernardino Line	2040	RTP	$300,000
4TL204	SANBAG	Elderly & Handicapped Assistance	2025	RTP	$137,000
4120215	SANBAG	Express Bus Euclid Ave from Foothill Blvd to Pomona Rincon	2030	RTP	$128,695
4120211	SANBAG	Express Bus Grand/Edison Ave from Chino Hills Pkwy to Milliken Ave	2030	RTP	$30,088
4120206	SANBAG	Express Bus Haven Ave from Banyan St to Edison Ave	2030	RTP	$18,387
4120209	SANBAG	Express Bus Riverside Avenue from Sierra Ave to University Ave	2030	RTP	$28,416
4120205	SANBAG	Express Bus San Bernardino Ave from Sierra Ave to E St	2025	RTP	$15,729
4120204	SANBAG	Express Bus Sierra Ave from Riverside Ave to Marygold Ave	2025	RTP	$13,372
4160001	SANBAG	Express Lane Direct Connectors from SB I-15 to WB I-10 and reverse, NB I-15 to WB I-10 and reverse and WB I-10 to SB I-15 and reverse	2035	RTP	$550,000
4120219	SANBAG	Full BRT Foothill/5th from Monte Vista Ave to Boulder Rd	2025	RTP	$415,911
4120200	SANBAG	I-10 @ Alder Ave new interchange	2035	RTP	$99,000
SBD031269	SANBAG	I-10 @ Beech Avenue - construct new interchange with 4-lane overcrossing	2035	RTP	$113,023
4M01027	SANBAG	I-10 @ California St interchange improvements	2040	RTP	$45,000
4160004	SANBAG	I-10 @ Grove Ave/4th St new interchange	2040	RTP	$128,000
4120198	SANBAG	I-10 @ Mt Vernon Ave interchange improvements	2022	RTP	$37,125
4H01003	SANBAG	I-10 from Ford St to Riverside County Line - Add 1 HOV lane each direction	2030	RTP	$106,800
4M01045	SANBAG	I-215 @ Campus Pkwy new interchange	2040	RTP	$57,000
OM630	SANBAG	I-215 @ Mt. Vernon/Washington St Interchange reconstruction	2035	RTP	$109,048
4M01044	SANBAG	I-215 @ Palm Ave interchange improvements	2040	RTP	$11,000
4160049	SANBAG	Passenger Rail Service from San Bernardino to Metrolink Line to Ontario Airport	2040	RTP	$740,000
4120194	SANBAG	Redlands Passenger Rail - Add a second track/additional passing track throughout the corridor of Phase 1 project	2030	RTP	$183,490
4M01047	SANBAG	SR-210 @ Del Rosa Ave interchange improvements	2040	RTP	$36,000
4160017	SANBAG	SR-210 from I-215 to I-10 - Add HOV Lane	2040	RTP	$110,000

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4160011	SANBAG	SR-60 @ Central Ave - Ultimate interchange improvements - possible ramp widening and auxiliary lanes	2040	RTP	$50,000
4A01293	Twentynine Palms	Construct new 4-lane Lear Ave/Sunfair Rd from Poleline Rd to Marine Corps Air Station	2025	RTP	$18,500
4160014	Twentynine Palms	Operational improvements including signal and intersection modification on SR-62 from West Twentynine Palms City Limits to Morongo Rd	2035	RTP	$1,799
4A01297	Upland	Widen Central Ave from South Upland City Limits to Arrow Route from 4 to 6 lanes	2025	RTP	$3,590
4M07004	Victorville	I-15 @ Bear Valley Rd interchange improvements	2040	RTP	$25,000
4M1006	Victorville	I-15 @ Boulder Rd/Dale Evans Pkwy interchange reconstruction	2040	RTP	$500
4M07014	Victorville	I-15 @ Mojave St new interchange	2035	RTP	$50,000
4FR04	Victorville	SCLA - Track and intermodal yard improvements (Phases 1 through 4)	2030	RTP	$673,305
4120227	Victorville	Widen 3rd Ave from 0.20 miles s/o Nisqualli Rd to 600 feet n/o Bear Valley Rd from 2 to 4 lanes	2025	RTP	$1,400
4120228	Victorville	Widen 3rd Ave from 600' n/o Bear Valley Rd to Bear Valley Rd from 0 to 4 lanes	2025	RTP	$400
4A07149	Victorville	Widen Amargosa Rd from Air Expressway to Village Dr from 0 to 4 lanes (includes wash crossing)	2035	RTP	$6,000
4160022	Victorville	Widen Amethyst Rd from Bear Valley Rd to Sycamore Rd from 2 to 4 lanes	2035	RTP	$1,000
4160021	Victorville	Widen Amethyst Rd from Mojave Dr to Dos Palmas Rd from 2 to 4 lanes	2035	RTP	$4,000
4A07223	Victorville	Widen Amethyst Rd from Rancho Rd to Mojave Dr from 0 to 4 lanes	2035	RTP	$8,000
4120235	Victorville	Widen Amethyst Rd from Sycamore Rd to Eucalyptus Rd from 0 to 4 lanes	2035	RTP	$2,000
4A07285	Victorville	Widen Baldy Mesa Rd from La Mesa Rd to Olivine Rd from 0 to 4 lanes	2035	RTP	$632
4A01310	Victorville	Widen Baldy Mesa Rd from Palmdale Rd to La Mesa Rd from 2 to 4 lanes	2035	RTP	$3,000
4A07156	Victorville	Widen Bear Valley from US-395 to Monte Vista Rd from 2 to 6 lanes	2035	RTP	$8,000
4A07355	Victorville	Widen Bear Valley Rd from 0.5 miles e/o I-15 to US-395 from 4 to 6 lanes	2035	RTP	$11,000
4A07096	Victorville	Widen Bellflower Rd from Palmdale Rd to Sycamore St from 0 to 4 lanes	2035	RTP	$12,000
4A07331	Victorville	Widen Civic Dr from Mojave Dr to Roy Rogers Dr from 0 to 4 lanes	2025	RTP	$2,000
4A07307	Victorville	Widen El Evado Rd from Hopland Rd to Palmdale Rd (SR-18) from 2 to 4 lanes	2035	RTP	$5,000
4160031	Victorville	Widen Eucalyptus St from 0.15 miles w/o Cobalt Rd to Mesa View Dr from 2 to 4 lanes	2035	RTP	$3,800
4A07249	Victorville	Widen Eucalyptus St from Amargosa Rd to Amethyst Rd from 0 to 6 lanes	2025	RTP	$2,400
4120224	Victorville	Widen Eucalyptus St from Amethyst Rd to 0.15 miles w/o Cobalt Rd from 0 to 4 lanes (includes wash crossing)	2035	RTP	$3,600
4A07286	Victorville	Widen Eucalyptus St from Mesa View Dr to Bellflower Rd from 0 to 4 lanes (Victorville portion only)	2035	RTP	$2,000
4A01325	Victorville	Widen Hook Blvd from US 395 to 0.4 miles west of Topaz Rd from 0 to 4 lanes	2035	RTP	$4,000
4160036	Victorville	Widen Hook from Amethyst Rd to Topaz Rd from 2 to 4 lanes	2025	RTP	$2,000
4A07387	Victorville	Widen Hopland St from 0.25 miles w/o Cobalt Rd to El Evado Rd from 2 to 4 lanes	2035	RTP	$3,500
4A07309	Victorville	Widen Hopland St from US-395 to 0.25 miles w/o Cobalt Rd from 0 to 4 lanes	2035	RTP	$5,200
4A07224	Victorville	Widen La Mesa Rd from Caughlin Rd to White Rd frm 0 to 4 lanes	2035	RTP	$4,000
4A07288	Victorville	Widen La Mesa Rd from Mesa View Dr to Cantina Rd from 0 to 4 lanes (Victorville portion only)	2025	RTP	$2,600
4A07092	Victorville	Widen La Mesa Rd from White Rd to Mesa View Dr from 0 to 4 lanes	2035	RTP	$14,000
4A07332	Victorville	Widen Mariposa Rd from 0.3 miles s/o Yates Rd to Palmdale Rd from 2 to 4 lanes	2035	RTP	$1,800
4A07221	Victorville	Widen Monte Vista Rd from Palmdale Rd to Bear Valley Rd from 2 to 4 lanes	2035	RTP	$5,000
4A01339	Victorville	Widen National Trail Highway from Mojave River to I-15 from 2 to 4 lanes	2025	RTP	$4,600
4A07239	Victorville	Widen National Trails Hwy from Mojave River to 1.6 miles n/o Mojave River from 2 to 4 lanes	2035	RTP	$3,200
4A01343	Victorville	Widen Ottawa St from Mariposa Rd to Third Ave from 0 to 4 lanes	2035	RTP	$6,000

APPENDIX B - Aggressive Scenario

RTP/FTIP ID	Lead Agency	Description	Year Complete	Project List	Project Cost
4A07023	Victorville	Widen Palmdale Rd from US 395 to I-15 from 4 to 6 lanes	2035	RTP	$8,600
4A07282	Victorville	Widen Rancho Rd from Amethyst Rd to El Evado Rd from 0 to 4 lanes	2035	RTP	$2,000
4A07376	Victorville	Widen Rancho Rd from El Evado Rd to 0.4 miles w/o National Trails Highway from 2 to 4 lanes	2035	RTP	$1,400
4A01362	Victorville	Widen Rancho Rd from National Trails Highway to 0.4 miles w/o National Trails Hwy from 0 to 4 lanes	2035	RTP	$154
4A07113	Victorville	Widen Seneca Rd from Topaz Rd to Amargosa Rd from 2 to 4 lanes	2035	RTP	$2,000
4A01354	Victorville	Widen Seneca Rd from US-395 to Topaz Rd from 0 to 4 lanes	2035	RTP	$4,000
4A07075	Victorville	Widen Smoketree Rd from Topaz Rd to Amargosa Rd from 0 to 4 lanes (includes wash crossing)	2035	RTP	$5,000
4A07359	Victorville	Widen Stoddard Wells from Dante St to I-15 from 2 to 4 lanes	2035	RTP	$5,200
4160065	Victorville	Widen Topaz Rd from 0.3 mi. n/o Bear Valley Rd to Eucalyptus St from 2 to 4 lanes	2035	RTP	$2,600
4160064	Victorville	Widen Topaz Rd from Dos Palmas Rd to Luna Rd from 2 to 4 lanes	2025	RTP	$1,000
4A07283	Victorville	Widen Topaz Rd from Eucalyptus Rd to Smoketree Rd from 0 to 4 lanes	2035	RTP	$4,000
4A07164	Victorville	Widen Topaz Rd from Hopland St to Dos Palmas Rd from 0 to 4 lanes	2035	RTP	$12,000
4M04033	Yucaipa	I-10 @ Wildwood Cyn interchange improvements	2035	RTP	$35,000
4A04415	Yucaipa	Widen 14th St from Yucaipa Blvd to Oak Glen Rd from 2 to 4 lanes	2025	RTP	$4,405
4A01366	Yucaipa	Widen 5th St from Yucaipa Blvd to County Line Rd from 2 to 4 lanes	2025	RTP	$5,215
4A07248	Yucaipa	Widen Ave E from 14th St to Bryant St from 2 lanes to 4 lanes	2025	RTP	$894
4A04417	Yucaipa	Widen Bryant St from North Yucaipa City Limits to County Line Rd from 2 to 4 lanes	2025	RTP	$7,796
4A01367	Yucaipa	Widen California St from Wildwood Cyn Rd to County Line Rd from 2 to 4 lanes	2025	RTP	$1,535
4A01368	Yucaipa	Widen Calimesa Blvd from Oak Glen Rd to County Line Rd from 2 to 4 lanes	2025	RTP	$2,820
4A01370	Yucaipa	Widen County Line Rd from Calimesa Blvd to Bryant St from 2 to 4 lanes	2025	RTP	$2,499
4A01371	Yucaipa	Widen Live Oak Canyon Rd from West City Limit to I-10 from 2 to 4 lanes	2025	RTP	$1,527
4A07041	Yucaipa	Widen Oak Glen Rd from Colorado St to Casa Blanca Ave from 2 to 4 lanes	2025	RTP	$7,748
4A01376A	Yucaipa	Widen Wildwood Cyn Rd from Calimesa Blvd to Colorado St from 2 to 4 lanes	2025	RTP	$1,359
4A01376B	Yucaipa	Widen Wildwood Cyn Rd from Colorado St to Holmes St from 2 to 4 lanes	2025	RTP	$4,785
4A07022	Yucaipa	Widen Wildwood Cyn Rd from Outer Hwy I-10 St to Calimesa Blvd from 2 to 4 lanes	2025	RTP	$11,905
4A04418	Yucaipa	Widen Yucaipa Blvd from I-10 to Bryant St from 4 to 6 lanes	2025	RTP	$15,642
4160016	Yucca Valley	Operational Improvements including signal and intersection modifications on SR-62 from SR-247 to East Yucca Valley Town Limits	2035	RTP	$1,053
4A01386	Yucca Valley	Widen SR-247 from North Yucca Valley Town Limits to SR-62 from 2 to 4 lanes	2035	RTP	$15,317
4A01383	Yucca Valley	Widen SR-62 from Fairway Dr to SR-247 from 4 to 6 lanes	2030	RTP	$20,904
4160071	Yucca Valley	Widen Yucca Mesa Dr from Buena Vista Dr to SR-62 from 2 to 4 lanes	2040	RTP	$5,605
				Total	**$9,301,318**

FTIP	$90,133
RTP	$9,295,503
Total	$9,385,636